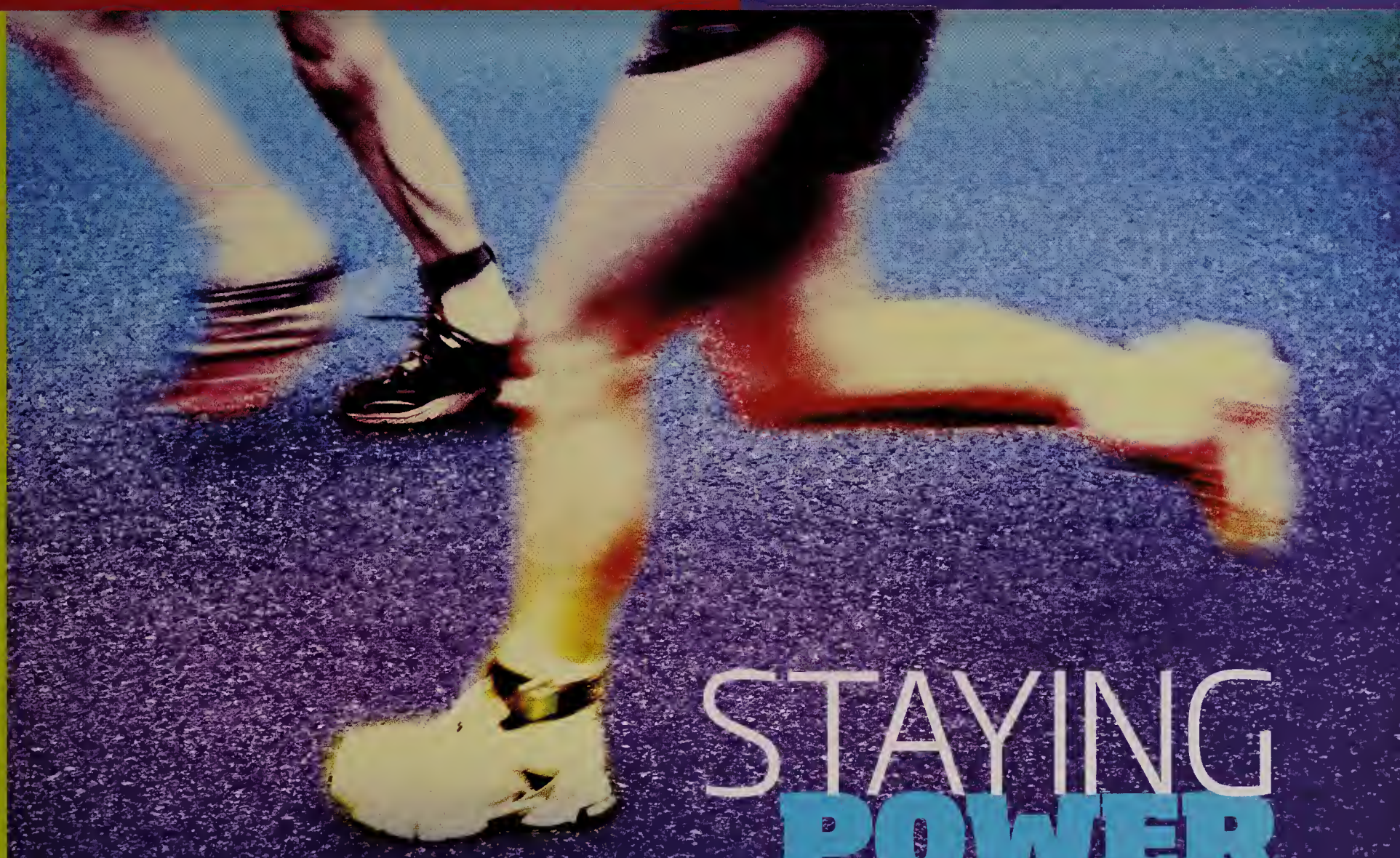
CIO

HIGH-SPEED DEVELOPMENT
Lotus F1 adopts an agile strategy **17**

MEET THE CHIEF CUSTOMER OFFICER
The customer experience is top priority **22**

GUIDE TO RISK MANAGEMENT
Protect your business–and your career **28**

GEN Y AND YOUR FUTURE WORKFORCE
Competing with Google for talent **36**



STAYING POWER

How do CIOs outlast the typical 5-year tenure? By **avoiding** classic blunders, **winning** the CEO's confidence and **enjoying** a dash of good luck **38**

BY MINDA ZETLIN

PLUS

A Risky Disconnect
The annual **Global Information Security Survey** says CIOs and CSOs still aren't in sync **26**

BUSINESS TECHNOLOGY LEADERSHIP

www.cio.com

October 15, 2012 $9.00

Roy Cahn-Speyer
HP PRODUCT MARKETING MANAGER FOR THE AMERICAS, HEWLETT-PACKARD CO.

Roy Cahn-Speyer manages HP's BladeSystem enclosure and two-socket server business for the Americas. He is responsible for product launches, market development, and transition planning.

Future-Proof your IT with Smarter Servers

What will the typical two-socket server look like in five years?
The industry is trending toward a server with 64 cores, 4TB to 8TB of memory and two 100Gbit network ports. We think it will be capable of hosting 300 to 500 virtual machines.

That sounds like a very large server. But what would happen if it were to crash?
Not a pretty picture. That's why at HP, we've started three multiyear projects to address the server of the future. *Project Moonshot* leverages hundreds of low-power processors, like the ones in cell phones, each running its own copy of Linux for applications like Web hosting or Hadoop. *Project Odyssey* aims to improve server reliability and fault tolerance by adapting technology from our NonStop and Business Critical Systems Group to Windows and Linux. And *Project Voyager,* which adds intelligence to our servers, helping to increase uptime, automate server management and reduce the need for staff intervention. In fact, the HP ProLiant Gen8 blade, tower and rack-mount servers, launched in March, are the first deliverables of Project Voyager.

How do these smarter servers powered by AMD Opteron™ 6200 Series processors meet the business needs of CIOs today?
IT managers need to increase server uptime, simplify server management and decrease total cost of ownership. These goals are met by the ProLiant Gen8 servers, which feature a new version of the HP's Integrated Lights-Out processor (iLO 4) iLO 4 delivers a complete set of intelligent, automated management features for self-analysis and healing, from initial deployment to daily management, service alerting and remote support. On the performance and value side, AMD Opteron 6200 Series processors offer the industry's highest core density and the exceptional price/performance that AMD is known for.

Can you explain how iLO 4 delivers a smarter and more automated server?
iLO 4 is like a computer inside each ProLiant Gen8 server. It is connected to all server subsystems and has a 4GB flash memory. iLO 4 enables agentless phone home functionality, which makes remote management painless. HP will even help you manage your servers via our free cloud-based Insight Online portal hosted on hp.com. In addition, the new Active Health System continually monitors and logs 1600 parameters to the 4GB flash memory so even the trickiest problems can be root-caused up to five times faster. We also made initial deployment easier by eliminating the need for CDs. Drivers and firmware needed to install an operating system are now embedded in iLO 4. When it comes time to update firmware and drivers, HP offers the free Smart Update application that automatically sequences every step in the correct order and requires a maximum of one reboot, which takes the risk out of firmware and driver updates.

> When you're counting on a server farm to power your business, you want a smarter server with intelligence close to the application.

How is the performance running compute-intensive workloads?
The AMD Opteron 6200 Series processors deliver a major boost in price/performance. Available with 4-, 8-, 12- or 16-core AMD processors, the ProLiant Gen 8 servers feature the highest core density. Twice the cores per server lets you host virtual machines with a dedicated core for each VM. It also lets you serve more database users and solve more complex HPC problems. The Gen8 server design with AMD Opteron 6200 Series processors balances flexibility, expandability and energy efficiency.

What advice would you offer CIOs looking to future-proof their server infrastructure? When you're counting on a server farm to power your business, you want a smarter server with intelligence close to the application. This will enable you to automate manual operations, lower operating costs and increase uptime. Moving in this direction is a journey. We believe the ProLiant Gen8 server with AMD is an excellent place to start.

FOR MORE INFORMATION:
visit **www.hp.com/go/gen8bladeserver2**

CIO
Custom Solutions Group

OPTERON
PROCESSOR
AMD

HP ProLiant DL385p Gen8 server

Lower your costs without lowering your expectations.

Welcome to the new **HP ProLiant DL385p Gen8 server.** Powered by AMD Opteron™ 6200 Series processors, it offers you 150 customer-inspired design innovations with 3X faster firmware updates.* It's also designed to fit your budget, with the lowest cost per virtual machine* and a 15% savings over similarly configured servers.* It all adds up to more innovation and performance, for less.

The power of HP Converged Infrastructure is here.

Learn more with the IDG white papers *Virtual Machines Find Ideal Physical Home* and *Transforming Your Database from a Pain Point to a Power Point.*

Visit hp.com/go/gen8rackserver2 or scan the QR code.

*For details on claim substantiations, visit hp.com/go/gen8rackserver2

© Copyright 2012 Hewlett-Packard Development Company, L.P. The information contained herein is subject to change without notice. The only warranties for HP products and services are set forth in the express warranty statements accompanying such products and services. Nothing herein should be construed as constituting an additional warranty. HP shall not be liable for technical or editorial errors or omissions contained herein.

AMD, the AMD Arrow logo, AMD Opteron, and combinations thereof, are trademarks of AMD.

Machine data goes in.
Business insight comes out.
Our software turns your raw machine data into refined business insights by making sense of the systems that run your company—servers, website clickstreams, mobile devices and more. It's what we call *real-time operational intelligence*—and why over half of the Fortune 100™ use Splunk® software and have the business results to prove it.
www.splunk.com/goto/listentoyourdata
splunk> listen to your data™

VOLUME 26, NO. 2 October 15, 2012

Start

From the Editor in Chief **4**
Chatter **4**
From the CEO **6**
World View **8**
Quick Fix **12**
News Scan **14**

4

17

Grow

INNOVATION & BUSINESS VALUE

Racers develop software at breakneck pace **17**
Your employees don't think you're innovating **18**
Hertz builds goodwill with video kiosks **20**
A new exec focuses on customer experience **22**
HBO wins big when IT tackles development **24**

Run

LEADERSHIP & OPERATIONAL EXCELLENCE

CIOs and CSOs still don't see eye-to-eye **26**
Five tips for better risk management **28**
How to overcome digital disruption **30**
Why Google doesn't buy software **30**
What it's like to be Facebook's CIO **32**
Schools love Office 365–but companies don't **34**
Government agencies question cloud safety **34**
Use tech toys to lure Gen Y workers **36**

26

48

Finish

Index **46**
Fed up with political ads? An app helps you spot the lies **48**

COVER ILLUSTRATION BY SEAN MCCABE/IMAGE BY THINKSTOCK

Staying Power **38**

COVER STORY How do CIOs outlast the typical 5-year tenure? By **avoiding** classic blunders, **winning** the CEO's confidence and **enjoying** a dash of good luck.

BY MINDA ZETLIN

Peter Weis, CIO at Matson, says a lengthy CIO tenure requires having a comfortable relationship with the CEO.

FROM THE
EDITOR IN CHIEF

Marathon CIOs

One of the enduring but painful truths of a CIO's career is that it's a revolving-door job by nature. With an average CIO tenure of 5 years, it's actually amazing that so many enterprise IT initiatives get done at all.

I often wonder how corporate America would cope if the rest of the C-suite turned over at such a feverish rate. When is continuous disruption ever good for business?

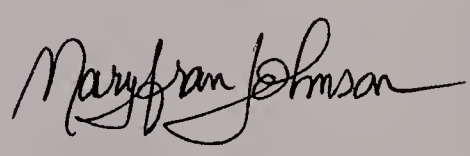
A CIO with a long tenure at one company is unfortunately an outlier, an exception to the normal experience. Yet some CIOs sail past that 5-year milestone and continue to thrive. What are they doing differently? We explored that question in this month's cover story ("Staying Power," Page 38). We discovered a set of factors that are key to longevity: well-honed skills at executive relationship-building, the smarts to sidestep classic mistakes (failed projects, blown budgets, etc.), plus a bit of serendipity.

"There are always a lot of headwinds for CIOs to try to get through," says CIO Peter Weis, a 9-year veteran at Matson, a transportation and logistics firm. CIOs can do outstanding work yet still catch the blame when business models sour, strategy shifts or top management changes.

Indeed, the wildest card in the CIO longevity deck is that relationship with the chief executive. Ultimately, it trumps all other factors. Consider this: More than 75 percent of CEOs are promoted from within their own organizations, according to a 2011 study by Booz and Co. That casts your C-level colleagues in a whole new light, doesn't it? Any one of them could become your next boss.

Another outlier in our story is Rick Roy of CUNA Mutual, an 8-plus year veteran who navigated a CEO change, ran operations for a few years, and then returned to the CIO job. As he was getting to know the new CEO, he orchestrated his travel so he could attend some industry events with the new chief. "You have to step out of your comfort zone to engage that leader wherever he or she happens to be," he advises.

Some of the best advice in our companion story ("The Politically Astute CIO," Page 40) underscores the importance of humility, credibility and a willingness to share credit. "You're better off making business partners look good than coming off as the smartest one in the room," as Weis wisely puts it. "Trust is only as good as the level of comfort you've built with your business partners, and making every success look like a business success will build that trust."



Maryfran Johnson, Editor in Chief, *CIO* Magazine & Events
mfjohnson@cio.com

CHATTER

Free Apps Are No Friend

CIOs have enough to worry about when it comes to bring-your-own-device (BYOD) policies. Contributing Writer Jeff Vance says it's nearly impossible to stop staff from **downloading rogue apps,** but CIOs can lay out ground rules to **minimize the risks.** The CISO of the Riverside Medical Center, for example, says IT reserves the right to **remotely wipe devices.** Many companies also **encrypt data** because 96 percent of free iOS apps and 84 percent of free Android apps access information such as **contacts, calendars or locations** from the device, according to a study by Appthority, a mobile-app risk-management company. www.cio.com/article/716368

Easing Up for E-discovery

E-discovery can be a **difficult and expensive process,** and one that catches many companies off-guard. Contributing Writer Stephanie Overby says smart IT leaders should be **proactive** about preparing for e-discovery because the time frame for responding to requests can be limited. Experts recommend developing a **records-management program** and a **litigation-response plan,** and having timely communication with your provider if you're being sued. www.cio.com/article/715689

Cleaning Up Complexity

Complexity in the data center can lead to **increased costs** and **reduced agility.** According to a Symantec survey, 65 percent of companies have **too many business-critical apps** in the data center. A Symantec expert says it's key to get visibility beyond platforms, reduce the number of **backup applications,** and establish **C-level ownership** of information governance. www.cio.com/article/716378

Compiled by Editorial Assistant Lauren Brousell. Have a comment about a story in this issue? Go to *www.cio.com/issue/20121015* or write to *letters@cio.com*.

PHOTO BY ANDREA WINCHENBAUGH

I AM NOT A
ROBOT
I said no to the status quo and yes to ShoreTel UC
Thinking outside the box and avoiding the same old providers can be hugely rewarding for your business. Just ask anyone who has dismissed the status quo in favor of ShoreTel's fundamentally different all-in-one UC solution. With no legacy in the way, ShoreTel designed complexity out for an all-around ease that frees up your valuable IT resources, giving you the lowest total cost of ownership guaranteed. So why settle for average when you can do so much better? Visit shoretel.com/sayyes
ShoreTel
Brilliantly simple™

PHOTO BY WEBB CHAPPELL

FROM THE
PUBLISHER EMERITUS

What Goes Around Comes Around

A recent issue of *Network World* (a sister publication to *CIO*) included a headline that immediately caught my attention. "IT Groups Eschew BYOD." "Eschew"? No way. That must be a mistake. Nearly all the research I have read about the bring-your-own-device (BYOD) trend says the opposite: Many CIOs are planning to adopt BYOD as an accepted IT practice.

But as I read the story, I realized the headline was accurate. Four IT executives featured were indeed dismantling their BYOD programs. But why?

The new policy being adopted by these seemingly renegade IT execs might best be described as "bring our company-owned tablet or smartphone to the office." These IT groups were among the very early BYOD adopters. They embraced the idea of accommodating personally owned devices, and for a while it worked well. A relatively small portion of the company—often starting with the most senior executives—was the primary beneficiary of the initial policy.

This is a common theme on the path to BYOD. As one CIO said to me during a panel I recently moderated, "BYOD was all along a misnomer. It really was a strategy for higher-ups who told their CIO, 'I want an iPad, make it happen.'"

This seemed to be the case for the executives featured in *Network World*, but then it entered a "be careful for what you wish for" phase as second- and third-tier managers sought to follow the lead of their bosses. The new requests swamped the networks with registration, configuration, setup, security and privacy concerns.

So totally independent of each other, these featured executives came to the same decision: Centralize the purchase and deployment of tablets and smartphones. In addition to simplifying device management, this strategy gave the companies more leverage with their preferred carriers. When individual employees paid their monthly phone bills and submitted them on expense reports, the companies had no clout to negotiate with. When all the monthly bills were rolled into one, they got lower rates.

Bottom line: the more popular your current BYOD strategy is, the more likely you too will say, "Enough is enough," and bring all tablet and smartphone device management and billing under your control.

Gary J. Beach

Gary Beach, Publisher Emeritus
gbeach@cio.com

CIO
BUSINESS TECHNOLOGY LEADERSHIP

PRESIDENT AND CEO Michael Friedenberg
GROUP PUBLISHER Bob Melk
PUBLISHER Adam Dennison
PUBLISHER EMERITUS Gary J. Beach
CHIEF CONTENT OFFICER John Gallant

EDITORIAL

EDITOR IN CHIEF
Maryfran Johnson
EXECUTIVE EDITOR
Mitch Betts
MANAGING EDITOR
Christine Celli
SENIOR EDITOR
Kim S. Nash
COPY EDITOR
Colleen Barry
CONTRIBUTORS
Stacy Collett, Kenneth Corbin, Elizabeth Heichler, George Hulme, Joab Jackson, Greg Laugero, Kyle McNabb, Divina Paredes, Paul Rubens, Maya Townsend, Minda Zetlin
EDITORIAL ASSISTANT
Lauren Brousell

CONTRIBUTING EDITORS

CIO EXECUTIVE COUNCIL
VICE PRESIDENT, EDITORIAL AND PROGRAMS
Rick Pastore
EDITORIAL MANAGER
Diane Frank

DESIGN

EXECUTIVE DIRECTOR, ART AND DESIGN
Mary Lester
ART DIRECTOR
Terri Haas

ONLINE EDITORIAL

EDITORIAL DIRECTOR
Brian Carlson
EXECUTIVE EDITOR
Dan Muse
ASSISTANT MANAGING EDITOR
Shane O'Neill
SENIOR EDITORS
Brian Eastwood, Al Sacco
SENIOR ONLINE WRITERS
Kristin Burnham, Richard Hein, Tom Kaneshige, Thor Olavsrud
ASSOCIATE ONLINE EDITOR
Sheryl Hodge

RESEARCH

RESEARCH DIRECTOR
Carolyn Johnson

CXO MEDIA INC.

©CXO Media Inc.

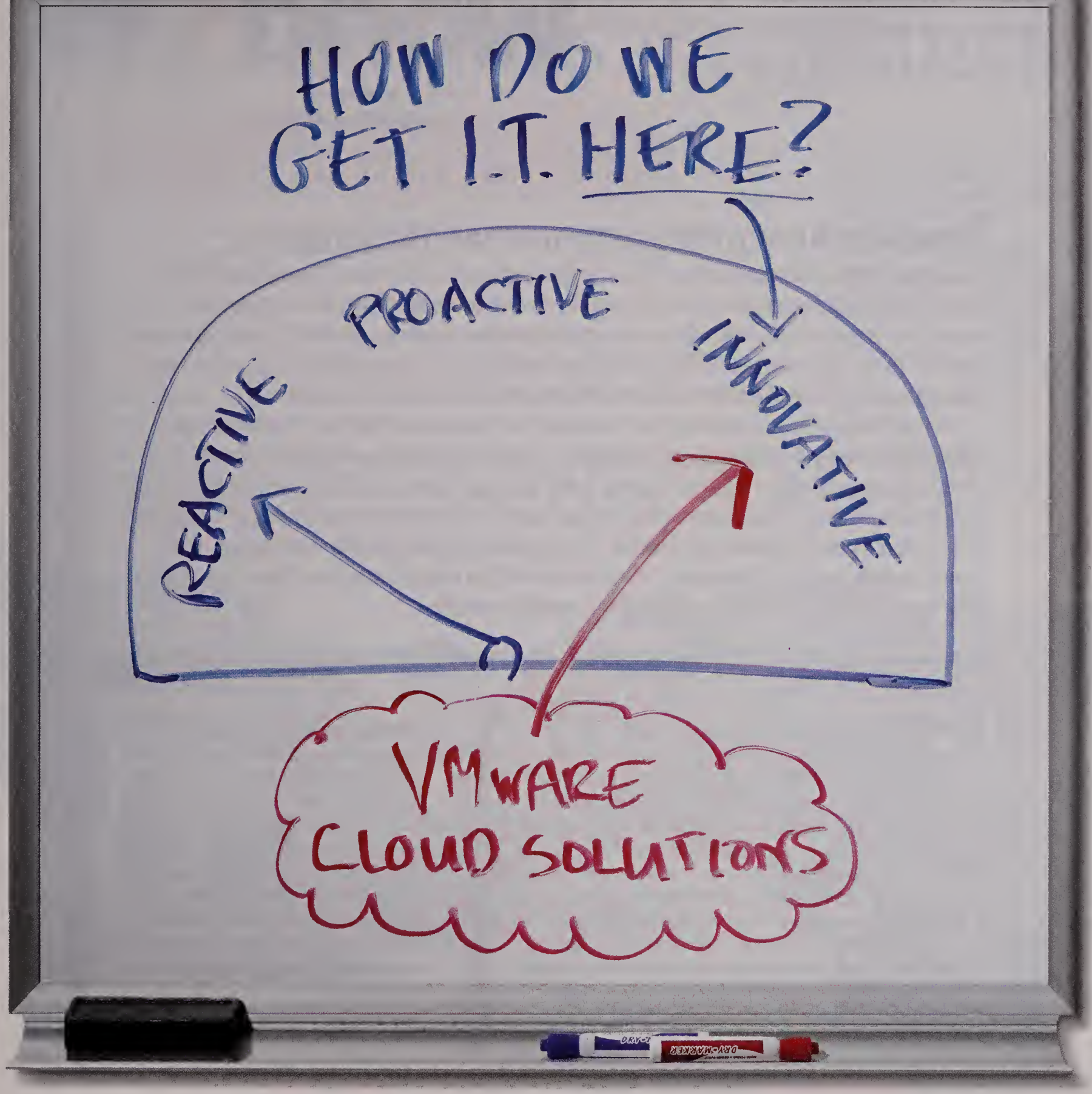
INTERNATIONAL DATA GROUP
CHAIRMAN OF THE BOARD
Patrick J. McGovern
IDG COMMUNICATIONS, INC.
CEO
Bob Carrigan

BPA WORLDWIDE

CONTACT US

WHO COVERS WHAT *www.cio.com/staff*
EMAIL *letters@cio.com*
PHONE 508 872-0080

Copyright © 2012 VMware, Inc.



Today, 99% of the Fortune Global 500 rely on VMware®, the leader in virtualization and cloud infrastructure. We help drive IT innovation by providing a proven path to a cloud environment that's secure, reliable and highly automated. It's not just about getting to *the* cloud. It's about getting to *your* cloud.

vmware®
The power behind your cloud.

Visit vmware.com/whiteboard

world View

Fresh **Ideas** from
Around the Globe

Retailers Aim to Please Omnichannel Shoppers

CANADA Michel Joncas, VP of IT at fashion company Groupe Dynamite in Montreal, joins a growing number of retailers who are blending consumer and enterprise technologies. His strategy begins with using internal hardware and applications to increase efficiencies, and extends to implementing customer-facing social media tools that nurture relationships with customers.

Joncas hopes to provide better service for the omnichannel customer–one who shops online and in physical stores and uses social media, the phone or a combination of channels to engage with the company. To that end, he is giving some employees iPads with Web-based apps to help them get closer to customers in stores and over social media. "You have to have people dedicated, full-time, looking at this," he says. "That's one of the most important lessons we've learned." **www.itworldcanada.com/publication/cio**

Better Data Access Improves Sales for LG

INDIA LG Electronics India was "clueless" about end customers, and it was affecting their service. The company couldn't get simple information like who bought which product and when. Facing a sudden surge in demand from smaller cities and towns, Daya Prakash, CIO at the Indian branch of the consumer electronics and appliance giant, needed a Web interface to facilitate communication between LG and local trade partners. Now, any sale anywhere is immediately captured, and the system provides information on stock replenish dates, identifies market trends for LG, and registers every end consumer when a product is bought. Supplies of fast-moving models are quickly replenished, and LG's forecast accuracy has improved by 50 percent. **www.cio.in**

Eatery Digs Into Cloud, Mobile

SPAIN With six restaurant chains and more than 9,000 employees spread over hundreds of locations, Grupo Vips needed a communication system that worked more effectively for mobile staff. CFO and CIO Jesus Soto elected to migrate to Office 365 using a mobility offering designed by Microsoft and telecom carrier Telefónica. The solution lets IT set security policies and remotely wipe devices or deploy applications. The project will reach 1,000 end users in its first phase. **www.idg.es/cio**

Mail Service Sees Slow Gains from Shift to Cloud Services

NEW ZEALAND There's a limit to what collaboration tools can accomplish if working together isn't already part of the corporate culture, says Miles Fordyce, group technology manager at New Zealand Post, a mail service. The company adopted Google Apps for Business in 2009, expecting to cut costs and increase worker productivity, but those goals have been elusive. Fordyce's 500-strong team takes care of 11,000 employees, many of whom have stuck with the familiar Microsoft Office. Fordyce says Google's cloud products have matured over the past three years and more people are getting used to its user interface. He still predicts savings from the move to cloud-based tools as long as it's driven by employees' needs, not by finances. "Don't take it on to save money, because that's coming at it from the wrong angle." **cio.co.nz**

–Compiled by IDG News Service from *CIO* magazine affiliates worldwide

FROM DETAILS TO DESIRES: THE POWER OF BIG DATA.

Companies aren't short on data. In fact, with the average large business storing more than 200 terabytes, companies have more than enough data to tell them who is buying their product, as well as how, when and where the buying happens.

DATA'S NEW VOICE.

Today, however, customers expect a company to know why they're buying. Or why they aren't. Because when a company knows what motivates customers, it can serve them better.

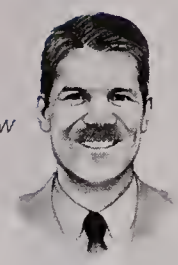
The good news is such data exists, just not in the columns, rows, reports and purchase histories we're used to. It's called big data, and it comes from tweets, videos, clickstreams and other unstructured sources. It's the data of desire. And today, we have the technology and tools to make sense of it.

So now, instead of learning which customers it has lost, a company can learn which customers it might lose and present timely offers or products motivating those customers to stay. Using IBM Smarter Analytics to identify which customers were most likely to switch to another communications carrier, XO Communications was able to predict likely customer defections within 90 days, reducing churn by 35 percent the first year.

With IBM Smarter Analytics, companies are gathering big data and using it to ask—and answer—smarter questions about what their customers really want.

ibm.com/usingbigdata

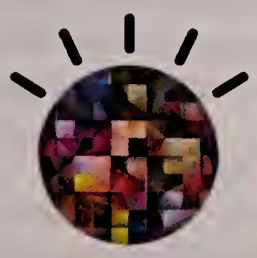
"For the first time, we can decide which promotions to run based on facts rather than gut feel."



Patrick Neeley
Chief Business Officer, Chickasaw Nation Division of Commerce

Combining big data with company data paints a better picture of the customer.

80% *of the data currently produced is unstructured—coming from sources like images, videos, tweets, posts and e-mails.*



MINING MOTIVATION.

Enter Smarter Analytics from IBM—software, systems and strategies that help companies combine their own enterprise data with their consumers' unstructured data to see a fuller picture. A big data platform, paired with predictive and sentiment analytics, allows organizations to correlate, for example, sales records with social media mentions for more relevant insights.

LET'S BUILD A SMARTER PLANET.

IBM

IBM, the IBM logo, ibm.com, Smarter Planet and the planet Icon are trademarks of International Business Machines Corp., registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml.
©International Business Machines Corporation 2012.

Bum-Coo Cho
SENIOR VICE PRESIDENT
MOBILE COMMUNICATIONS DIVISION
SAMSUNG ELECTRONICS

Bum-Coo Cho was appointed senior vice president for the Enterprise Business Team of Samsung's Mobile Communications Division in 2011. He is the head of the Global Business Center, which oversees all B2B aspects of Samsung Electronics.

FOR MORE INFORMATION Visit www.samsung.com/enterprise

Meeting the Challenges of Enterprise Mobile Security

Despite the immense success of Android in the consumer market, some IT decision-makers have been reluctant to adopt it. We recently spoke with Samsung senior vice president Bum-Coo Cho, who explained how Samsung is making sure its Android implementation meets IT expectations for enterprise use.

What are the most important mobility trends that you see affecting enterprises today?

From what I'm seeing, companies are moving away from the "corporate-liable" model (where they procure and manage and secure all end-user devices) and more and more toward the "individual-liable," or BYOD, model, where employees purchase their own personal devices and use them at work. I just received an email from a company that is now 50% BYOD and 50% corporate-liable. Only a short time ago it was 100% corporate-liable.

From a mobility standpoint, smartphones and tablets are allowing enterprises and institutions to be more innovative and efficient. With the right device, employees can share information, upload field data, or serve customers from anywhere. School children will carry all their books and do their homework on one tablet, and doctors will have access to all of a patient's records at a touch. Smartphones and tablets will revolutionize how we do things as one machine can take the place of many.

What are the key concerns of CIOs and other IT leaders with regard to BYOD that you encounter among your customers and potential customers?

The movement to BYOD is obviously putting a lot of pressure on CIOs. BYOD has many obvious benefits for the company and the employees, but CIOs are concerned because employees can bring so many different devices into the workplace (versus the days when CIOs supported one to two devices per territory). CIOs need to balance those benefits against potential security breaches, and the easiest way is to have a limited number of devices available. Consequently, there are debates taking place in offices everywhere about what devices are going to be supported.

Also, companies may have BYOD policies in place but not necessarily the suitable level of security guidelines and policies concerning individual devices. Depending on the experience of the CIO, the level of guidelines and policies can be quite different.

At a recent roundtable discussion, a group of corporate information security and risk management leaders said they considered Android an unsecure platform that many businesses will not support because of security concerns. How does Samsung address those concerns?

Unfortunately, this has meant that all Android devices are perceived to have poor security. And that is why we need to change the conversation, as Samsung is the first to market with a more secure hardware Android device. For the past 18 months, Samsung has closely studied the enterprise business and analyzed the potential issues that are there.

While this market is pretty new for us, we have put a lot of effort into our partnerships and R&D to develop robust, market-leading mobile security features that address the concerns of CIOs and security leaders. Due to our enhanced security, we are differentiating Samsung GALAXY from generic Android.

What are you doing specifically?

When we talk to CIOs, we stress the four pillars of Samsung GALAXY security that distinguish us from the competition.

The first is Mobile Device Management (MDM). Samsung works closely with our MDM solution partners to provide enterprise customers with IT security policies that are unique in the marketplace. With 338 IT poli-

"Samsung will continue to form alliances with major global business solution suppliers in order to guarantee that Samsung GALAXY mobile devices have superior security features and functionality."

cies through 725 applications programming interfaces (APIs), Samsung enables companies to enhance hardware and software component control and prevent mobile security failures. Our MDM solution partners include SAP, MobileIron, SOTI, Juniper Networks, and many more.

Next is our support of VPN connectivity, which provides mobile professionals with behind-the-firewall access for a secure connection from anywhere. Samsung was the first company to provide Secure Sockets Layer (SSL) VPN for the Android platform. Our devices provide broad VPN compatibility for most partner solutions and cover all levels of VPN security, including IPsec, PPTP, and L2TP. Our VPN partners include Cisco, Juniper Networks, F5, and others.

Then there's Samsung On Device Encryption (ODE), which provides high levels of encryption for internal and external memory. Unlike generic Android devices, which support 128-bit AES data encryption, Samsung GALAXY devices support the more secure AES 256-bit encryption. Samsung mobile devices that use ODE have also been granted FIPS 140-2 Security Certification from the U.S. government, making Samsung ODE the first FIPS 140-2-certified solution for Android devices.

Finally, while most Android devices support Microsoft's Exchange ActiveSync (EAS) protocol, Samsung GALAXY mobile devices provide the most comprehensive EAS implementation on the market, with support for 40 IT policies.

What else is Samsung doing to ensure that its Android implementation meets IT expectations?

Thanks to those four pillars, Samsung believes it is already well prepared for enterprises. However, these developments are relatively new, and we need to spread the word that our Samsung GALAXY devices are ready for the workplace. Enterprise CIOs are expected to know about our security enhancements as well as our SAFE (SAmsung For Enterprise) program. A SAFE-approved device meets Samsung's rigorous security criteria and is specifically configured with the enterprise user in mind.

We're also working closely with our alliance partners as we develop a new architecture with higher levels of security required by certain customers, such as government agencies. If our Samsung GALAXY mobile devices meet the stringent security requirements of government agencies, that's an important message for CIOs to hear.

What is Samsung's vision for enterprise mobility?

I spoke recently with our corporate strategy team about how we want to be positioned in the global enterprise market in 2020, and how we would like to be perceived by enterprise customers. Although everyone had different ideas, we are in agreement that Samsung should be the leader for secure enterprise mobile solutions not only for hardware but also for software.

Samsung will continue to form alliances with major global business solution suppliers in order to guarantee that Samsung GALAXY mobile devices have superior security features and functionality.

Samsung is also interested in developing solutions in areas such as education, healthcare, and the public sector. We believe these industries have much to gain from the new technology available, especially tablets enabled with the right learning or productivity solution.

That's the sort of vision we are developing, and we'll put our best efforts into making it happen. Ultimately, our collaborations with our partners will help us build the solutions that truly distinguish Samsung GALAXY mobile devices in the enterprise. ■

SAMSUNG

CIO
Custom Solutions Group

Happy Hunting

Chad Lilly, director of recruiting at mobile startup Lextech, shares his tricks for finding developers who can code well *and* play nice

1 Plan ahead. "New technologies will spring up. Think of talents you'd want a developer to have in order to adapt quickly," Lilly says.

2 Get them thinking. Lilly recommends Lego Mindstorms, a toy that combines Legos and programming. It offers real-time insight into your candidate's problem-solving skills.

3 Try hiring weekends. When you have a number of hires to make, have several candidates come in at once and decide who to hire by Sunday. According to Lilly, these weekends "require a larger commitment from the company, but offer a 60-75 percent closing rate." *–Richard Hein*

For more tips, see: www.cio.com/article/716392

We're undergoing significant change, and I can't be everywhere. How can I help my managers lead?

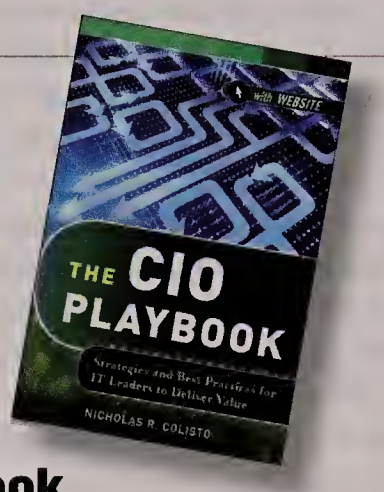
ALWAYS make sure your managers know what's going on. Your significant change is just one item on their very full plates. As soon as a client hollers, the change will get put on the back burner unless you keep your managers focused. Information updates should be on the agenda for every staff meeting. Be sure to cover what's new and different since the last meeting, what's on the schedule for the coming month, how that will affect their staff, and what milestones will be hit next.

SOMETIMES offer communication or change-leadership training. Let's face it: Many IT managers were promoted because they are strong technically, but they haven't had a chance to develop people skills. Consider a behaviorally based, practical workshop that includes post-training coaching or application discussions. Then help reinforce that training by showing where it can be applied on the job. An alternative is to ask others within the organization who have those people skills to take over some of the communications tasks and free up your managers to focus on the technical stuff.

NEVER forbid innovation and creativity during change. Some leaders try to tamp down on variance and make implementation exactly the same in every area. That's a mistake. It inhibits staff creativity and ignores the very real differences between areas. To keep departmental tweaks from spiraling out of control, give innovation updates in your staff meetings. Who knows? One innovation might become your entire company's best practice.

Maya Townsend is founder and lead consultant at Partnering Resources, which helps companies meet change and collaboration challenges.

WORTH READING



BOOK The CIO Playbook
By Nicholas R. Colisto

Colisto, CIO of home-construction company Hovnanian Enterprises, shares his seven steps for partnering with business peers, focusing on the right innovations and running IT as a business. He says as the economy recovers, CIOs are in a good position to drive transformations and produce positive business results. *Wiley, $49.95*

PHOTOS BY THINKSTOCK

SAMSUNG

mobile

POWERFUL

COLLABORATIVE

SECURE

NO

YES

The Next Big Thing for Enterprise is Here.

Samsung GALAXY S III joins the growing family of Samsung SAFE (Samsung Approved for Enterprise) devices making it an extremely powerful business tool. Ensure peace of mind with advanced Microsoft Exchange Active Sync features, on-device AES 256-bit encryption, and support for industry leading VPN and Mobile Device Management providers with more than 338 IT policies. With Samsung GALAXY S III , keep sensitive emails, meeting details and documents secure, no matter where your work takes you.

SAFE
SAMSUNG APPROVED FOR ENTERPRISE

Samsung GALAXY S III

SAFE2SWITCH Trade in one or more qualifying devices when you upgrade to a new Samsung SAFE smartphone like the GALAXY S III , and get up to $300 device. Scan to find out what your device is worth. www.samsungsafe2switch.com

news scan

Apprenticeship Programs Used to Fill U.S. Factory Jobs

U.S. mid-skill manufacturing has as many as 600,000 unfilled jobs, yet compared with Europe, American companies have yet to make a widespread investment in finding the trained workers they need.

Enter the Northern European apprenticeship model, which a small number of employers—including Volkswagen—have adopted.

By collaborating with Chattanooga State Community College on a program that combines classroom learning with work-site training, Volkswagen's plant in Chattanooga, Tenn., now offers a three-year apprenticeship curriculum called Volkswagen Academy.

Twenty students are enrolled each year and receive training in skills such as reading diagrams, assembling car parts and installing a dashboard. Participants are also paid an hourly wage while they work.

Of the program's first class of recruits, about 60 percent are expected to graduate in 2013 and will be guaranteed a job. *–Slate*

Big Data Boosts Accuracy in Hiring

At Xerox, the hiring process for its call centers used to focus on candidates with specific kinds of prior experience. But that was before a computer program made it clear that personality, not experience, was the most important factor in choosing a candidate who would succeed at the company.

The data specifically suggested that creative types were more likely to stick around, a finding that led to a 20 percent reduction in attrition. The company now uses the software for its 48,700 call center jobs and asks applicants to assess the truth of statements such as, "I ask more questions than most people do," and, "People tend to trust what I say," to help categorize their personalities. Xerox is also now working with a startup called Evolv, which has developed a model for identifying the ideal call center worker.

–The Wall Street Journal

From Mainframe to Windows in Just 84,500 Person-Hours

The Ohio Department of Public Safety was spending over $1 million a year mainframe costs and it faced the looming discontinuation of the Unisys model the mainframe was built on. So the agency decided to switch to a Windows-based system and took the bold step of doing all the work in-house. Instead of bringing in consultants, which could have cost as much as $10 million, the agency trained its staff on .Net and on how to move from a hierarchical to a relational database.

Keith Albert, the chief of IT governance and strategic direction for the department, says he struggled to find successful migration stories that could show him if he was on the right path, so he was inspired to write an 18-page document detailing his project, which he published on the department's website. *–Computerworld*

Drivers on the Decline in the Developed World

Experts say car ownership and distances driven may be reaching a peak and are actually declining in developed countries. Recessions and high gas prices have reduced the distances that drivers go in countries such as the United States, France and Britain since 2008. But many predictions now say that even when the economy recovers, driving rates may not bounce back. Cost is one factor: Fuel prices have risen for all, and insurance premiums for the young have soared. But there is also the influence of the Internet. A University of Michigan survey of 15 countries found that in areas where Internet use is high, fewer young people have driver's licences.

If car use has peaked, what are the implications? One is that vehicle-makers will not easily find new markets. Governments may also a need to rethink infrastructure and rely less on funds from fuel, parking and road fees. *–The Economist*

General Motors Will Open Its First In-House IT Center

General Motors is opening a new IT center in Austin, Texas, which will add 500 new jobs. This is the company's first step in its plan to bring most of its IT work in-house over the next three years. GM will be looking to hire software developers, database experts and other IT staff. The IT center will be the first of several that GM plans to open in the United States. GM CIO Randy Mott says this strategy is designed to help the company keep up with its business partners and rebalance its employment model. *–Reuters*

Oil Stocks Spike in Price Thanks to Human Error

Seven oil-related stocks, from companies such as Rowan and National Oilwell Varco, saw an unusual spike due to a fat-finger error. Their stock prices jumped between three and nine percent before the gains were quickly reversed.

The error occurred because a trader accidentally entered the wrong size for a transaction. Exchanges operated by NYSE Euronext, Nasdaq OMX and Direct Edge Holdings reviewed the trades, saying they were potentially erroneous, but later said they would stand. Traders noted the unexpected activity, and some guessed it was a software error or a human mistake. *–The Wall Street Journal*

Introducing the industry's only integrated data center physical infrastructure.

Flexible, agile, easy-to-deploy, integrated Schneider Electric data centers.

The only integrated infrastructure that moves with your business

Schneider Electric™ has redefined today's data centers. We've uniquely bridged facilities and IT by providing the industry's only end-to-end supporting architecture and "all-in-one" management software needed to ensure the highest availability and energy efficiency.

We call this holistic system "data center physical infrastructure." Not only has it revolutionized data centers, it has transformed data center managers' day-to-day responsibilities. It's faster and easier to deploy, and it's just as simple to manage via software that gives you integrated visibility from rack to row to room to building. And, most important, it's agile enough to adapt to your business needs — today and tomorrow.

Why Schneider Electric data centers?

- > Reduced design and deployment time from months to just weeks
- > Out-of-the-box self discovery and configuration via integrated software
- > Applied expertise, industry relationships, thought leadership, and life cycle services from a single company

Business-wise, Future-driven™.

APC by Schneider Electric

SQUARE D by Schneider Electric

APC™ by Schneider Electric is the pioneer of modular data center infrastructure and innovative cooling technology. Square D™ by Schneider Electric offers industry-leading electrical distribution and industrial control products, systems, and services. These brands are integral parts of the Schneider Electric data center portfolio.

10 ways your data center can be business-wise, future-driven tip sheet and enter to win an iPad® 2!

Visit www.SEreply.com Key Code u406v or Call 1-888-289-2722 x6462

Schneider Electric™

©2012 Schneider Electric. All Rights Reserved. Schneider Electric, APC, Square D, InfraStruxure, and Business-wise, Future-driven are trademarks owned by Schneider Electric Industries SAS or its affiliated companies. All other trademarks are property of their respective owners. • www.schneider-electric.com • 998-4729_GMA-US_ipad2

Michael Benjamin
VICE PRESIDENT OF PRODUCT MANAGEMENT
LEVEL 3 COMMUNICATIONS

Michael Benjamin is a vice president of product management for Level 3 Communications with responsibility for security, cloud and next generation services.

FOR MORE INFORMATION
Visit www.level3.com/security

Level (3)®

CIO
Custom Solutions Group

Common Sense Security for Uncommon Threats

What is it about today's threat environment that you think makes a Managed Security Service Provider worthy of serious consideration?

Threats today are no longer single vector, static attack mechanisms. Rather, Advanced Persistent Threats (APTs) are exceedingly complex, rendering them difficult to detect and mitigate. Managed Security Service Providers such as Level 3 provide trained, certified and experienced security teams with market leading tools and capabilities that aggregate and analyze multiple vectors to identify an attack. Their situational awareness and holistic understanding of the threat landscape enable the customer to leverage the knowledge accrued from previous attacks against other entities.

What would a Managed Security Service Provider offer that a typical company can't supply on its own?

Managed Security Service Providers bring critical scale and added layers of capability around their offerings. Level 3 takes this a step further. Our unique ability to correlate events across our global network infrastructure enables us to have threat visibility that we believe is unequalled, combined with our multi-layered portfolio of security protection to help insulate customers against previously unknown risks. Our security intelligence and threat visibility enable us to write policies, implement controls and execute broad-reaching strategies that help customers ensure business continuity from the earth to the cloud.

What are the key attributes and characteristics that one should look for in a Managed Security Service Provider?

It is important for an organization to look for a Managed Security Service Provider with deep experience in protecting and securing both logical and physical environments. A company looking for network-based security for their IT environment requires a partner with a strong knowledge base and sophisticated skill set in this area.

What's unique about Level 3's approach to security services?

Level 3's culture of security drives our unique approach to security services. We utilize our deep experience, our unique network visibility to potential threats, combined with our multi-layered portfolio of services to proactively protect customers from security threats. Our knowledge is derived from three data sources: our network to identify attacks and infected hosts, our DNS infrastructure and name resolution system to identify what attacks are targeting, and our content delivery platform, which hosts some of the most trafficked websites in the world. Though these capabilities enable us to proactively defend against familiar threats, security is not completely black and white. We leverage our situational awareness in working with customers to understand the grey.

Does Level 3 provide consulting services as well?

We recognize that not every security engagement, customer requirement and risk is the same. Accordingly, we understand the need for sophisticated consulting services to develop specific solutions designed for individual customer environments. Our consultants conduct an in depth review of the client environment and explain to the customer their current risks and vulnerabilities. We then provide recommendations for resolution, including how a customer can best evolve their current security practices to a new level of protection.

How might an organization that worked with a different Managed Security Service Provider or was providing security on its own get started with Level 3?

The experience starts with our first customer engagement, where we learn about the critical business needs of the client organization. We use this knowledge of the client environment to conduct a thorough assessment and analysis of their threat profile, and address the targeted areas where our security solutions can provide increased protection and risk mitigation. Recognizing that every customer situation has the potential to be different drives Level 3 to have a core focus on customer experience, which involves every touch point in interacting with a customer. ■

Every second counts in Formula 1 racing, and **Graeme Hackland,** IT director for Lotus F1, wanted application development to keep pace.

PHOTO COURTESY OF LOTUS F1

High-Speed Development

Lotus F1 adopted an agile development strategy to give pit crews and car designers better data faster **BY KIM S. NASH**

When organizations say they must make split-second decisions or risk losing to competitors, it's usually an exaggeration. Unless you're talking about Formula One racing.

Engineers in the pit crew use telemetry and business analytics tools to make adjustments to a car racing at more than 185 mph. Every fraction of a second counts, says Graeme Hackland, IT director for Lotus F1 Team, a two car team co-sponsored by Lotus Cars and Renault.

At a recent race in Bahrain, a Lotus F1 driver missed first place by just three seconds. No one says IT was to blame. But Hackland says he wants to make sure IT runs friction-free and that application development, in particular, goes better than it has. "If software is causing problems to end users or distracting them from their main job, that's the worst possible scenario for us."

So Lotus moved away from traditional application development methods in favor of agile techniques, including Scrum and visualization. Hackland says he wanted to erase the perception that IT doesn't understand how the pit crew and car designers like to work. "They wanted us ▸▸

89% Downloads from mobile app stores that are free. Gartner **30% People who turn off their smartphone's GPS due to privacy concerns.** Pew Research **54% CIOs who say it's hard to find skilled IT professionals.** Robert Half Technology

▸▸ **Agile development** Continued from Page 17

to deliver more right the first time," he says.

The continuous communication between developers and users under agile development can clarify how the end product should look, feel and work much earlier in the process, says Margo Visitacion, an analyst at Forrester Research. But organizations underestimate the culture shock of going agile. "Collaboration is a lot different from taking requirements, throwing them over a wall and expecting perfection months later," she says.

Half of Hackland's 40-member IT group is dedicated to software development. Even so, the waterfall method the team had been using—gather requirements, create functional and technical specifications, build and test—could get slow. The users were involved mainly at the beginning and end, not during the whole process.

Yet it's that time in the middle when collaborators can make small corrections and additions that greatly improve the finished product, says Visitacion. "When you see something tangible faster, it creates a stronger sense of reality of what's going to be valuable to you and what's going to be extraneous. It allows the team to focus on the essence of the project."

"If software is causing problems... that's the worst possible scenario."

-Graeme Hackland, IT Director, Lotus F1

Under Lotus F1's new agile approach, users attend daily meetings with developers and look at progress every three weeks. Testers are involved all the way through. "By the time we deliver, there's been a huge amount of interaction, which we never used to have," Hackland says.

His team recently used visualization software from iRise to improve a race-strategy system that helps the crew determine when to bring cars in for a pit stop. It can calculate 10,000 race simulations in the time it takes to run a lap. If crew engineers have to fiddle with a clunky user interface or wait for a slow analytics result, they waste time and opportunity, Hackland says.

"If [IT changes] reduce the amount of manual work engineers have to do, they can focus on the car and driver," he says. And then maybe Lotus F1 will reclaim that three seconds.

Senior Editor Kim S. Nash can be reached at *knash@cio.com*. Follow her on Twitter: *twitter.com/knash99*.

crunch

'Where Am I, and What's Nearby?'

Marketers want to reach the growing number of smartphone owners who use location-based services, such as directions and local recommendations

U.S. smartphone users who access real-time, location-based information:

May 2011 — 55%

February 2012 — 74%

SOURCE: PEW INTERNET & AMERICAN LIFE PROJECT, SURVEY OF 2,253 U.S. ADULTS, MAY 2012

Innovation Lip Service

Executives think they're doing a fine job encouraging innovation in their companies. Many employees, however, are more inclined to see it as lip service.

That's the conclusion of a study by Development Dimensions International (DDI), a talent-management consulting firm that surveyed 513 business leaders and 514 employees in the United States.

When leaders were asked about their skill at "driving a culture of innovation," 76 percent rated themselves as above average or excellent. Only 57 percent of the employees viewed their execs the same way.

"Leaders were far more confident in their skills across the board–but employees felt that there really wasn't room to challenge the status quo," Rich Wellins, senior vice president of DDI, said in a statement.

When asked where their organization was on an innovation continuum, 39 percent of employees said that innovation is either a long shot for their company or a mere buzzword. However, most leaders' perceptions (74 percent) are that innovation is either an important priority or an absolute imperative for the company.

–Mitch Betts

59% Drivers who wouldn't feel comfortable in a car that drives itself. Ford **92% U.S. Internet users who go online to find recipes.** BlogHer **68% People who say technology will help reduce medical errors.** Wolters Kluwer

PHOTO BY THINKSTOCK

IF WE can help people who have a damaged skeleton, could they walk again?

A robotic skeleton
– a dream our software could bring to life.

How long before bionic humans are fact, not science fiction? With the development of sophisticated new exoskeletons, designed to help paralyzed people walk again, those days are not such a distant future.

Such engineering innovations are made possible by the **3D**EXPERIENCE software platform from Dassault Systèmes. Across all industries, teams of mechanical, software and electronic engineers collaborate on complex, high-tech projects – and get them right the first time. **3D**EXPERIENCE helps us think not just about improving the quality of life of the severely injured, but also about innovations that will put them back on their feet.

Our software applications for the 3DEXPERIENCE **Platform:**
CATIA / SOLIDWORKS / SIMULIA / DELMIA / ENOVIA
GEOVIA / EXALEAD / NETVIBES / 3DSWYM / 3DVIA

It takes a special kind of compass to explore the world's future possibilities. Innovative companies use our **3D**EXPERIENCE software platform to understand the present and navigate the future.

Find out more: **3DS.COM/HIGHTECH**

DASSAULT SYSTEMES

IF WE ask the right questions we can change the world.

Joseph Eckroth,
SVP & CIO, Hertz

HERTZ

The Kiosk Gets Friendlier

BY STACY COLLETT

THE PROJECT :: Weary travelers don't like waiting in line to rent a car. In 2011, Hertz became the first car rental agency to let customers at airports and neighborhood locations rent cars through a video kiosk featuring face-to-face chat. At ExpressRent kiosks, customers can complete an entire rental transaction while seeing and hearing a live rental agent located in one of three U.S. customer service centers. With interactive video kiosks now operating in 48 American markets, Hertz reports reduced wait times and improved ancillary sales.

THE BUSINESS CASE :: In 2010, Hertz installed traditional kiosks similar to those airlines use at major U.S. airports. But CIO Joseph Eckroth quickly learned that car-rental transactions are much more complex than checking baggage and choosing a plane seat. Car renters must consider upgrades, insurance plans, gas fill-up programs and car accessories—to name just a few options. And the rental agency requires a driver's license or verified passport.

Eckroth says a traditional kiosk is still good technology, "but it needs something else that keeps transactions customer-friendly and simple, and that never fails." With an interactive kiosk where agents can provide what customers need, Hertz could improve customer service, increase sales of upgrades and additional services, and ultimately allow Hertz to expand into auto-repair shops, hotels and parking garages without the cost of building and staffing a new rental counter.

FIRST STEPS :: Hertz enlisted its longtime kiosk partner NCR and added video technology from ClairVista, developer of a Live Expert platform for browser-based video chat, interactive sharing and co-browsing. "We liked what we saw in their technology. It's always risky to go with a small guy, but it was also extraordinarily beneficial to go in fast" and help them think through their software road map, Eckroth says.

The three companies embarked on what Eckroth calls an "extraordinarily difficult" integration process where the kiosk screens and touch technology had to sync with the video content. The team also added technologies such as key safes (which hold keys for cars at the kiosk's location) and readers for passports, driver's licenses and credit cards.

Today, 76 ExpressRent kiosks have been installed nationwide, with another 169 installations in process. In a Hertz survey of video kiosk customers, 82 percent rated their experience with the interactive video kiosks positively. More than two-thirds of airport renters said they would use ExpressRent again, citing faster service, convenience, ease of use and no waiting in line.

WHAT TO WATCH OUT FOR :: Video kiosks required a lot more network bandwidth than Eckroth's team had anticipated. The Hertz team assumed it could share the bandwidth at major airports, but video quality suffered, so Hertz had to get airport approval to upgrade the network. "It was quite a learning process for all of us," Eckroth says. "The smaller software company quickly got overwhelmed by our needs and desire to scale. The big hardware provider was also so large that we sometimes had problems getting the right attention or priority to do what we uniquely needed to accomplish. We continually have to balance and manage this carefully to ensure we can meet our business needs."

Stacy Collett is a freelance writer based in Illinois.

44% Hospital use of virtualized desktops by 2013. Imprivata **46% Adult Internet users who post self-made photos and videos online.** Pew Research **53% Companies that plan to train employees in big-data skills.** CompTIA

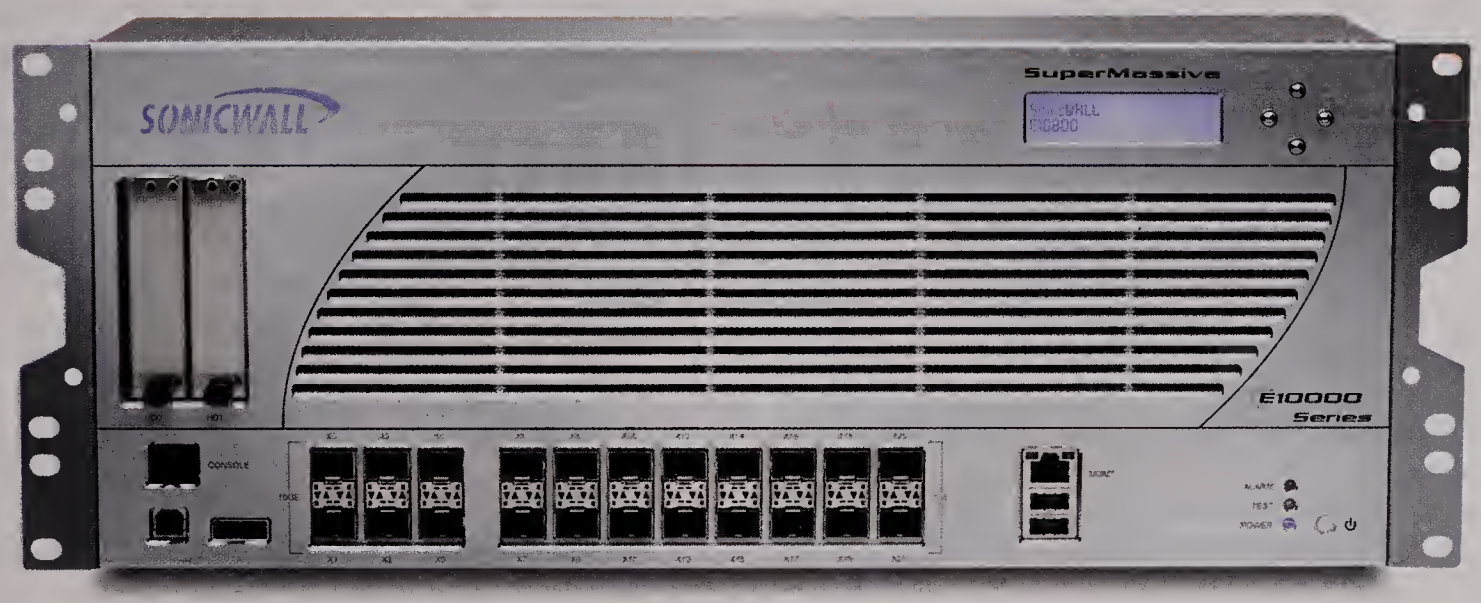
Security question #17

Can your Next-Gen Firewall pass the ultimate security and performance test? How about excelling in three?

NSS Labs RECOMMEND

The highest overall protection Next-Gen Firewall

recommended by NSS Labs.



3x Acclaimed

See the results for all three independent tests:
sonicwall.com/sweepNSS

It's been a rewarding year for Dell™ SonicWALL™ and our enterprise customers. According to NSS Labs, the global leader in independent security product testing, "For high-end multi-gigabit environments looking to upgrade defenses from their current firewall to a Next-Generation Firewall, the advanced architecture of the Dell SonicWALL SuperMassive™ E10800 running SonicOS 6.0 provides an extremely high level of protection and performance."

Dell SonicWALL secures the enterprise.

DELL SonicWALL

2012 Next-Generation Firewall Security Value Map provided by NSS Labs—a third party, global leader in independent security product testing and certification (nsslabs.com).
Copyright 2012 Dell Inc. All rights reserved. Dell SonicWALL is a trademark of Dell Inc. and all other Dell SonicWALL product and service names and slogans are trademarks of Dell Inc.

Meet the Chief Customer Officer

This new C-level exec, who is in charge of customer experience, will have a profound effect on application development for all channels **BY GREG LAUGERO**

Getting closer to the customer: We hear and read about it all the time, and for good reason. Companies that do it well have superior customer loyalty and a steady flow of sales. The challenge for CIOs is in the way the new corporate preoccupation with customer experience, or CX, affects their world. One result is the emergence of the chief customer officer. When this newly minted C-level official arrives to rework the customer experience, the ripple effects eventually end up on the CIO's desk, and you need to be prepared.

While delivering better customer experiences is all the rage, it's easier said than done. The invention of a new C-level role is a typical response to vexing challenges—appoint an executive to drive change.

As Forrester Research defines it, the chief customer officer is "a top executive with the mandate and power to design, orchestrate and improve customer experiences across every customer interaction." You'll hear those three verbs—"design," "orchestrate" and "improve"—often in any discussion about customer experience and the chief customer officer. After all, ensuring that any point of contact with customers ("touch points," in the CX vernacular) yields the kind of experience you want customers to have means consciously designing and orchestrating that desired outcome.

From the CIO's perspective, this new position can profoundly affect application development processes now that someone is in charge of ensuring your company creates great customer experiences across channels. Insofar as software applications are key touch points (they show up in websites, mobile apps, kiosks, you name it), they become part of the customer experience design challenge.

This is more than simple usability, and it certainly is more than improving your requirements-gathering process. It's about bringing a design mentality to the digital products and channels you create and support. Design starts with imagining how an application fits into someone's life and makes it better. It's about first understanding the problems you are trying to solve and then untethering your thought process from "functional requirements" that assume a PC is the primary delivery mechanism.

Design values ease-of-use as much as it values the functionality delivered. (That's a new way of thinking for CIOs.) In fact, a product that solves a meaningful problem well and is easy to use is a better experience than one that has every conceivable bell and whistle but is delivered via the wrong device or presents an uphill battle in learning to use it.

One problem that CIOs face when customer experience becomes a high priority is having the right skills in place.

One problem that CIOs face when CX comes to the fore is having the right skills in place. Chief customer officers, according to Forrester, typically come from marketing, sales, and operations. These roles are often capable of coming up with great ideas for better CX. But imagining a better CX is a far cry from actually designing it in all its nitty-gritty detail.

This is where CX becomes UX, for user experience. Having the skills in-house (not via an agency) to translate the CX vision into a detailed design is critical. You can't just interview stakeholders and turn their ideas into requirements and pass them along to developers and expect good results. That way madness lies.

For a better customer experience, you need the skills to interview actual users, turn observations into solution concepts, and then turn those concepts into designs. You need to be able to specify the design with rich detail so you can deliver something that is easy to use while solving a meaningful problem. Without these skills, great CX will remain elusive.

Greg Laugero is co-founder of Industrial Wisdom. He helps companies turn ideas into products with great user experiences. Follow him on Twitter: *twitter.com/prodctstrotegy*.

When you can't afford to experiment, go for experience.

With seven years of delivering SAP solutions in the cloud, T-Systems is one of the most trusted partners for business solutions.

T-Systems, one of the most trusted providers of cloud computing services, offers flexible solutions that enable you to respond to changing business needs. Our Dynamic Services allow you to individually configure your cloud. With T-Systems, you can customize your computing power, data storage, network capacity or even complex applications such as SAP – and pay only for what you actually use. For more information go to **www.t-systemsus.com**

T · · Systems

An IT Team Gets to Play in the Sandbox

The CIO at HBO turns a group of IT professionals loose to experiment, and they come up with a highly successful video service for subscribers **BY JOHN GALLANT**

Michael Gabriel, CIO at HBO, used the painful digital business lessons learned by the music industry to smooth the development of HBO GO, which gives subscribers access to HBO programming like *Boardwalk Empire*, *Curb Your Enthusiasm* and *Deadwood* on a wide variety of devices, such as tablets. Gabriel says the music industry didn't adjust fast enough to the digital distribution model, whereas HBO executives were ready to embrace it.

> We didn't want to just be order-takers, waiting for clients to ask us for things.

HBO has gotten a tremendous amount of praise for HBO GO. How did your IT team shape that?

I asked whether we could put together a little skunk works project to encode some videos and create a player and try to play them back and distribute them through the Internet, just to see what it would be like. [HBO's then-CFO] Bill Nelson supported that and gave us a little funding; we didn't need a lot.

We did it all in-house and it was really successful. We were able to demonstrate that we could encode a video with the metadata, put it into a player, select the show and play it. That was really the start of HBO GO, about eight years ago.

Did that establish a model for how you and the IT organization would work with the business?

We didn't want to just be order-takers, waiting for clients to ask us for things. We needed to be part of [the multichannel] evolution early enough so that we didn't have to rush. It gave us a chance to experiment with one of our cable affiliates, Time Warner Cable, in Milwaukee and Green Bay. That test was a lot more successful than a lot of people thought it would have been.

We saw consumers actually start to embrace it. It gave us something that we could then demonstrate to our affiliates to show them what HBO-through-the-Internet could be for them and for us, if we partnered together. We always envisioned it as something that would complement our broadcast. It would just be another way to see HBO, if you had a subscription.

Many CIOs would love to have that kind of involvement in such a game-changing project. What are the lessons learned?

First, understand where your industry is going and what its interaction with the consumer needs to look like. Be aware of what's happening with your competition.

The second [lesson] is to not create a false sense of urgency. It could have been very easy for me to say that if HBO doesn't embrace Internet distribution, that's going to be the end of HBO, just like the music industry. That kind of extreme viewpoint would have destroyed credibility.

Third, we needed to have the technical ability to execute: finding the right people who could do the prototype, who were big thinkers in terms of trying to do different things, and were aware of where technology was going. Giving them the opportunity to experiment a little bit in the sandbox really helped.

John Gallant is chief content officer of IDG Enterprise. Read the full interview at *www.cio.com/article/713540*.

PHOTO COURTESY OF HBO

Brian Kellner

EXECUTIVE VICE PRESIDENT, DEVELOPMENT AND PRODUCT MANAGEMENT, NEWSGATOR

Brian Kellner is responsible for developing the product roadmap at NewsGator. With more than 15 years experience, Brian has an affinity for companies that hire smart, hard-working people and a penchant for rapid innovation.

LEARN HOW SOCIAL COMPUTING CAN TRANSFORM YOUR ENTERPRISE, download the new white paper at **www.cio.com/whitepapers/newsgator**

Custom Solutions Group

The Social Edge

Connected businesses have competitive advantage

Why should companies incorporate social technologies into their business?
It's the only way knowledge-based companies can effectively compete. Most organizations have done a fine job automating their structured processes. The competitive edge now has to come from doing the unstructured things better—collaborating, communicating, innovating, learning and finding expertise. Doing these things and adapting to change faster and more effectively will separate the winners from the losers over the next few years. Social technologies are the most powerful weapons in this arena.

Are we still on the cusp of adoption, or has this technology become a top priority for businesses?
It has become a top priority, but plenty of companies still don't know how to tackle it. The leading adopters have moved beyond experimentation and are getting real benefits. They use their global workforces to solve problems quickly. We saw a great example where a consumer packaged goods company resolved a packaging problem in Ireland because a worker in Brazil faced the same issue and shared his experience using their social collaboration tools. Experts in this space are extending these principles beyond company boundaries to work fluidly yet securely with partners and customers. As executives start to see their peers and competitors realize these benefits, the urgency to keep pace rises.

"The pace of business is continually accelerating. Social technology is the only way to match that pace and turn it into a competitive advantage."

What are some of the biggest challenges enterprises face as they deploy these platforms?
Implementing social technologies cannot just be about the technology. Some companies take a "field of dreams" approach to adoption, but successful implementers find champions and help their workforces see the real business benefits. Ignoring the technology-infrastructure fit is a recipe for disaster. Companies that decide they want to try a shiny new thing without understanding how it ties in with security, search and user directories typically find themselves struggling to make the solution scalable and maintainable. They get mired in costs and technical complexity.

What are some of the ways social technology can be used to maximize business opportunities?
Social technology tends to provide the most benefit to organizations that have silos of information and boundaries—departmental, geographical and hierarchical. A technology configuration question faced by a developer may best be answered by a person in a services business unit. Someone in another country may be an expert on the specific chemical process a scientist needs to get the desired yield on a new drug. A junior employee may have a new product idea that could boost the bottom line. In addition, social technology is a great catalyst when dealing with change management. As companies buy or sell other companies, change focus and face new challenges in the marketplace, social technologies let them adapt more quickly and fluidly—allowing employees to immediately start building new connections and gaining new knowledge. In short, the pace of business is continually accelerating. Social technology is the only way to match that pace and turn it into a competitive advantage. ■

A Risky Disconnect

Companies stand to lose millions when CIO-CSO priorities aren't in sync, according to this year's **Global Information Security Survey** BY GEORGE HULME

When it comes to securing business-technology systems, CIOs face a challenge that won't go away.

The problem isn't necessarily new attack techniques, insecure software or even the latest government regulations. Rather, it's the challenge of seeing eye-to-eye with the CSO about how much security is enough.

The tenth annual Global Information Security Survey, conducted by PricewaterhouseCoopers and *CIO*'s sister publication, *CSO* magazine, found that many of the 12,052 business and technology execs surveyed think that an overall lack of security leadership remains a serious obstacle to getting CIOs and CSOs on the same page, and others feel they lack an effective information security strategy.

Consider this: Only a third of respondents said security policies were tightly aligned with business goals, and 46 percent said they were only somewhat aligned. ▶▶▶

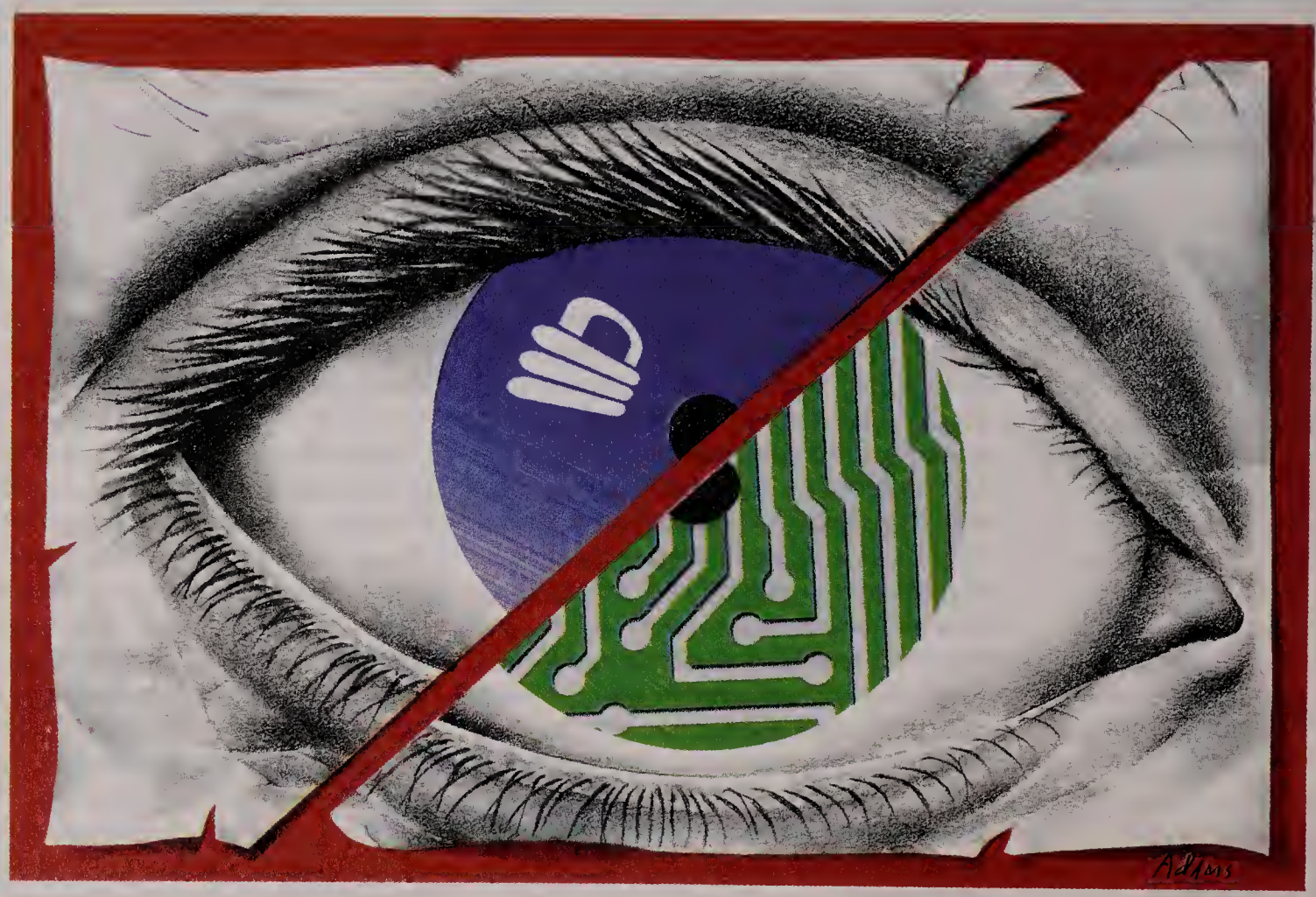


ILLUSTRATION BY LISA ADAMS

If only everything were this simple.

Introducing the easy-to-use Avigilon Control Center 5.0

ACC 5.0 is our most innovative and advanced surveillance software yet. Its easy-to-use interface allows you to quickly search through high-definition footage, while new features offer crash-proof enterprise server management, an intelligent virtual matrix to easily view and control footage on your remote workstation or video wall, and the ability to share and manipulate video with others in real time. Learn more at avigilon.com/ACC5

AVIGILON
THE BEST EVIDENCE™

With CIOs, business executives and IT security teams misaligned, it's next to impossible to build a consistent, sustainable security and risk management program that is capable of stopping the highly intelligent, motivated adversaries organizations face today.

This lack of cohesiveness between executive and security teams is also a large part of why so many believe that IT security gets insufficient capital and operating budget, says Jayson Street, CIO at Stratagem 1 Solutions, a security services provider. "Much of this disconnect falls at the feet of the IT security profession," Street says. "It is IT security that, too often, is failing the business. We don't communicate risk well enough, and why the risk is worth mitigating."

Frank Cervone, vice chancellor for information services and CIO at Purdue University Calumet, says many security professionals focus more on specific risks and not on how those risks stack up against other pressing issues. "There is a difference in scope as to what the CIO has to look at as opposed to the CSO. The CSO doesn't always see the larger issues and needs to do a better job relating IT risks to overall business risk," says Cervone.

Mark Lobel, a principal in the advisory services division of PwC, agrees. "The business leaders have to manage what is burning, and rarely does security rise to be a pressing issue, unless a breach or something bad has just occurred," says Lobel. "It's hard to explain and quantify such an abstract risk to the business."

Lobel advises CIOs to work more closely with their security teams, and says that CSOs should link security needs to the overall direction and strategy of the business. For instance, if an important part of the business is Web applications, being able to keep those applications secure is key to the business's success.

Everyone interviewed encourages CIOs to focus on building out security programs based on measurable risks and outcomes. Too many organizations today are operating on gut instinct, our survey revealed. The largest percentage of respondents (35 percent) measure the effectiveness of security spending by professional judgment, followed by reduced security incidents and breaches (29 percent), and total cost of ownership (24 percent). Less than a quarter of firms (24 percent) measure improvement against security metrics. One in five respondents do not know how the effectiveness of their IT security program is measured.

Those results are surprising, considering the substantial costs of security events when do they happen. Financial losses, according to our survey, average more than $1.6 million per incident.

George Hulme is a freelance writer based in Minnesota.

5 Things You Need to Know

RISK MANAGEMENT

1 START WITH YOUR OWN HOUSE. Plan for events that affect your ability to provide a stable, available, protected and recoverable technology infrastructure. Then look beyond IT's turf to see where technology can protect or expose assets. "So many IT departments only manage IT perimeter risk or data-breach losses, but nobody's doing anything about intellectual property," says Brian Barnier, a risk adviser with technology governance nonprofit ISACA and principal analyst at ValueBridge Advisors. Emphasize risk priorities to your staff, whose responsibilities may be more granular than yours.

2 IT'S NOT (JUST) ABOUT COMPLIANCE. Sarbanes-Oxley, HIPAA and other regulations are a piece of the puzzle, but don't let them drive your approach. "When we talk about risk intelligence, it's the CIO understanding [they're] providing the core IT infrastructure to support the business, and understanding all the things that put you at risk," says Deloitte and Touche Principal Bill Kobel. Ask if you have the right people and technology to stay ahead in your market. If you're stuck in the compliance mind-set, you've lost sight of business objectives, Barnier says.

3 IT'S A CAREER OPPORTUNITY. The CIO is well positioned to drive an enterprise-wide approach to managing risk. You have the best access to information—especially in companies dependent on IT-driven processes. "The more CIOs understand the business processes, the more [they] can advocate doing risk management right," says Barnier. A CIO who's implemented an IT-oriented risk framework "can flip it into a driver of enterprise-wide risk management," he adds. That framework can also help identify which risks are worth taking for their revenue potential.

4 THERE ARE CHEAT SHEETS. No one can save you the hard work of understanding the risks connected to your business operations, but there are frameworks to help, including ISO 31000 and Risk-IT, which is from ISACA. But be mindful of how you apply them, Kobel warns. Specialists may understand certain domains, such as compliance, but the framework may be too tactical and disconnected from the way business operates.

5 BAD GUYS KNOW YOUR BUSINESS. They seek vulnerabilities by looking at your operating behavior, products and services, Kobel says, and figuring out how to attack you through social engineering or your infrastructure. The same goes for insiders: "They have an innate knowledge of a business process or a set of activities, and they begin to navigate through the seams, to circumvent internal controls to achieve their objective. What they're doing is targeting the business side." *–Elizabeth Heichler*

data for:

Data is everywhere. Making it work for everyone is what we do best.

NTT DATA can help you harness, organize, and share data. Because we think data should be where and when you need it—making your processes more efficient, your business more effective, and your customers' lives better. If you're looking for a global partner with the expertise to create unique, global IT solutions and consulting for the people who rely on your business, NTT DATA is for you. Get to know us at nttdata.com.

NTT DATA

Global IT Innovator

ANALYST VIEW

Turn Disruption to Advantage

Companies that know how to develop and deliver software can turn digital disruptions into commodities

BY KYLE MCNABB

This is an age of digital disruption in a society that runs on software-fueled technology. Firms that can cultivate competencies in software development and delivery will establish competitive advantage and be better equipped to meet—even exceed—the engagement and experience needs of their customers, their employees and their constituents.

Digital disrupters are not just startups or new social and entertainment companies. You can find them across industries. While they cultivate many competencies, one stands out: They view software development and delivery differently than the industry at large. They see specific aspects like design, architecture, algorithm, analytics development, and engineering as core to their business. As something they cannot exist without. As essential to how they engage with their customers.

My team at Forrester has been testing a hypothesis for the past year by meeting with business and IT leaders in agencies, large enterprises and smaller companies.

Look at today's digital disrupters; as Forrester analyst James McQuivey notes, they're more swift and deadly than prior disruptive forces. They're faster, and they can turn what have historically been assets, like supply-chain strengths, into liabilities, and they can come from anywhere. What makes today's disrupters different?

McQuivey's research indicates that the main reasons digital disrupters can shake things up so much more dramatically today are: 1. They harness the power of digitally empowered consumers and tap into that empowered society. 2. They generate more ideas faster by focusing on the customer and asking "What's next?" taking a very outside-in approach. 3. They deliver total experiences by employing digital technology, fueled by software, to redefine products and services.

Our research shows that not all aspects of software development and delivery are core or essential, and many leaders are beginning to question assertions that all development is a commodity. Those questions could lead to big changes to your internal operations, and to how you work with partners.

Kyle McNabb is VP of application development and delivery for Forrester Research.

Google Prefers Homegrown Software

Many companies are happy to buy IT management software from big vendors. Not Google.

Google's corporate IT department will typically build management software itself, or adopt an open-source software package, before even thinking about purchasing proprietary software.

"In the long run, it is cheaper to build and not buy," says Justin McWilliams, a software engineer in Google's corporate engineering department, which manages IT for the company's internal operations and employees.

Google uses homegrown or modified open-source programs for tasks such as full disk encryption, remote computer management, compliance management, VPNs, videoconferencing and single sign-on.

Buying commercial software products doesn't work well at Google, McWilliams says, because it would still have to write software to get systems to communicate with each other. "Otherwise, we'd just have all these silos of data," he says.

Employing engineers to write and maintain code is more cost-effective than maintaining pricey support contracts with IT management software providers, McWilliams says.

A key reason for Google's build-first philosophy is that the company is growing rapidly. It currently employs over 32,000 people, almost twice as many as worked there in 2008. But the company's IT staff is not expanding at the same pace as the rest of the company, so the department has to keep scalability in mind when it's setting up operations.

"We have to find other ways to scale. We try to scale by building [in] automation and self-service, as opposed to just throwing more people at the problem," McWilliams says. Typically, it's not cost-effective to scale commercial software up so dramatically, he says.

–Joab Jackson

data for :

Data is there when we need it. Helping people use it to make an impact is what we do.

When used efficiently and effectively, data can improve lives. From supplying secure, personal credit card payment information for purchases to finding better ways to keep people connected worldwide, we help the thoughtful make an impression. If you're looking for a global partner with the expertise to create unique IT solutions and consulting for your business and customers, NTT DATA is for you. Get to know us at nttdata.com.

data for : the people

NTT DATA

Global IT Innovator

Inside the Social Network

Facebook's CIO describes his approach to managing operations and innovation—and talks about the luxury of having no legacy systems **BY DIVINA PAREDES**

How does Facebook CIO Tim Campos juggle the urgent short-term tasks and the important long-term work that compete for his attention at the giant social network?

In an interview, the 39-year-old Campos outlines a strategy he used at KLA-Tencor, where he was CIO before coming to Facebook two years ago: He separates the IT organization into "run" and "build" teams.

The run function's sole purpose is to keep existing services up and running while making sure the business is not investing disproportionately in services that don't provide a lot of value, he says. "They are not encumbered with figuring out new stuff to do; they are encumbered with keeping existing stuff up and running, relevant and efficient."

The build side of the organization has the opposite challenge, he says. "It is about, 'How do we build systems that are going to help our staff meet our growth targets more effectively [and] maximize our revenue potential for the company?'"

But this is not to say innovation is concentrated solely in the build side of the IT organization.

The run team creates a different kind of innovation, he says. "It is more operational [innovation] and less disruptive innovation."

The culture of innovation is further fostered by regular "hackathons" at Facebook. Held every few weeks, the hackathons let staffers work on innovative ideas, guided by the organizational credo of, "Move fast and break things." These sessions "empower employees to make bold decisions," says Campos.

"How effective those decisions are is judged from the basis of either producing results or learning something. But employees will never be punished because something did not go as expected."

Campos says Facebook also follows another route to innovation: partnerships with other companies.

"We have got a pretty good track record now with innovating with our IT partners," he says. "Those experiments have paid off wonderfully for both Facebook and the companies that have chosen to engage with us."

One such partnership led to the creation of a vending machine that dispenses computer accessories instead of snacks—and is now a fixture in Facebook's offices.

"We now have great operational efficiency through our help desk because we do not have to provide support for people who need a new keyboard or new power supply," Campos says.

He says Facebook reached out to international vending machine providers and told them, "Hey, we have a new idea for how to use your technology, but we need you to do something you have never done before."

To track consumption, the self-service system is linked to Facebook's employee directory and back-end systems. One vendor, IBM, jumped at the opportunity to build this vending machine, Campos says, and now has a prototype that is being sold to other companies.

Campos has seen his IT team grow from about 65 to 100 in his two years at Facebook. "We are bigger, but roughly the same size [when measured] as a percentage of the company." (Facebook also has 300 IT staffers from outsourcing companies.)

The team is "leveraged, very efficient," he says. "This is an organization that gets a lot done for every dollar that we get."

Facebook has self-service vending machines that let employees get a new keyboard or power supply without bothering the help desk.

Built From Scratch

So what are the upsides of being CIO of the largest social network?

"It is pretty obvious," Campos says. "You get to build the system from scratch; you are not dealing with legacy [systems].

"We move pretty fast in support of what Facebook needs of us because we don't have to think about rebuilding stuff as much as an [ordinary] IT organization."

"The proof is in the future," he says. "For us, the systems are working great today, but how they evolve, how they keep pace with Facebook's scale is the biggest challenge."

Divina Paredes is editor of *CIO New Zealand*.

data for :

Data exists to provide support. Helping people use it to beat the odds is what we do.

When used efficiently and effectively, data can improve lives. From helping first responders access the right data in an emergency, to providing caregivers accurate medical information to heal their patients, we help the brave improve their chances. If you're looking for a global partner with the expertise to create unique IT solutions and consulting for your business and customers, NTT DATA is for you. Get to know us at nttdata.com.

data for : the people

NTT DATA
Global IT Innovator

Where Office 365 Pays Off

Enterprise adoption of the cloud service has been slow, but school districts see its advantages

BY PAUL RUBENS

Microsoft has sold Office 365 to 46 new customers, including high-profile companies like Burger King, Japan Airlines and Hallmark Cards. But despite some marquee wins, enterprise adoption has been sluggish, and even recent price cuts of up to 20 percent have failed to make an impact.

"Microsoft is certainly not happy with the speed that Office 365 is being taken up in the enterprise," says Hanns Koehler-Kruener, a research director at Gartner. For many enterprises, the potential savings are not enough to offset the time and effort of migrating to the cloud, says Wes Miller, an analyst at Directions on Microsoft.

"The migration is costly, complex and fragile, and risks downtime with some of the most important services within an organization," he says.

While enterprises may be hesitant, Office 365 has met with considerable success in education. There are a number of reasons for this, and perhaps the biggest one is that Microsoft offers it for free or at a huge discount. In addition, students move through the system quickly—25 percent of the student body is replaced every year. This makes license management, particularly license retrieval, difficult if students are issued installed versions of Office software. By moving the product to the cloud, de-provisioning the service can be done automatically by disabling accounts. Plus, educational bodies receive large subsidies for their Internet connectivity.

"Our WAN circuits are the least expensive component of our network. They are cheaper than our LAN," says Richard Charlesworth, CIO of the Tennessee Department of Education. "That's the complete reverse of what you see in an enterprise."

Charlesworth chose Office 365 over Google Apps for Education, and more than 1,600 schools across Tennessee will have access to the service.

"It was very entertaining to watch those two big behemoths dance around the ring for dominance in K-12, but for us, Microsoft was much more attractive in the long term," he says. "What we see in Office 365 is a surfacing platform, a common platform onto which we can surface functionality. We want to build Web services and package them in SharePoint."

Fresno Unified School District is also in the process of migrating students and staff to Office 365. The biggest benefit will come from moving Exchange to the cloud, according to CTO Kurt Madden.

"We have six servers at our main site, and another site for redundancy, and we will be able to get rid of all of that," he says. Madden estimates that migrating Exchange will save the district up to $100,000 a year.

Paul Rubens is freelance writer based in England.

Cloud Could Save Gov't Billions but Sparks Security Fears

In response to a White House mandate, the agencies and departments of the federal government are gradually moving IT operations to the cloud in a shift that could save billions of dollars, but which also raises serious security concerns.

A new survey by MeriTalk, an online community dedicated to government technology, showed that 73 percent of federal IT managers saw data vulnerabilities and threat vectors as the primary barrier to shifting mission-critical apps to the cloud. Furthermore, 38 percent of the study's respondents said they prefer a private cloud, compared to just 10 percent who have engaged with a public cloud and 11 percent looking at a hybrid model.

Under the cloud-first policy the Obama administration promulgated in 2010, the General Services Administration has been soliciting feedback for a program that would enlist cloud brokers to assist federal agencies with the transition of their systems and applications to private-sector providers.

According to the MeriTalk report, the government could save $16.6 billion if each agency shifted three mission-critical applications to the cloud. Respondents said that more than half of their IT budget is spent supporting such applications.

But the government's drive to the cloud has been slowed by significant obstacles. Beyond the persistent security concerns, federal IT managers told MeriTalk that 70 percent of their budgets are devoted to the maintenance of legacy applications, leaving scant resources available for cloud-computing projects.

"Transitioning legacy, mission-critical applications to the cloud is not a forklift exercise—in many cases it's more like an organ transplant," MeriTalk founder Steve O'Keeffe said in a statement.

Nevertheless, the transition seems inevitable, if slow. On average, respondents projected that 26 percent of their mission-critical applications would reside in the cloud within two years, rising to 44 percent in five years. *–Kenneth Corbin*

data for :

Data takes you on a journey. Helping people use it to reach a destination is what we do.

When used efficiently and effectively, data can improve lives. From developing software for designing smooth and reliable flight routes, to creating automotive systems that alert drivers of road hazards sooner, we help navigators arrive safely. If you're looking for a global partner with the expertise to create unique IT solutions and consulting for your business and customers, NTT DATA is for you. Get to know us at nttdata.com.

data for : the people

NTT DATA
Global IT Innovator

Gen Y and Your Future Workplace

Hiring managers looking to attract young talent have to compete with the likes of Google. Does your company have what it takes? **BY TOM KANESHIGE**

It's 1 a.m. and Josh Robin is busy working.

"I'm kind of stir crazy, don't need a lot of sleep, so it's probably prime time for getting things done," says the fast-talking 25-year-old director of innovation at the Massachusetts Bay Transportation Authority (MBTA).

At any moment on any day, Robin might be Skyping with interns, Tweeting work updates, or using his personal iPhone to manage a cutting-edge mobile ticketing project. It drives him crazy that he doesn't have Wi-Fi at work and can't use his personal computer there.

Robin pays his iPhone bill out of his own pocket, while a corporate-issued BlackBerry collects dust. "BlackBerrys have become the metaphor for old-line IT," he says. "It would be a pain in the butt" if he was forced to use it.

If you think Robin is an oddity, think again. He is part of the next-generation workforce known as Millennials. They grew up right along with Facebook, Twitter, Skype and Apple's iPocalypse. They have different ways of working, different ideas about their jobs.

Appealing to Millennials with newfangled technology just might be a CIO's highest priority. Fact is, Millennials will drive either your IT policy or your attrition rate.

Just ask Mark Tonnesen, CIO of Electronic Arts (EA). EA is moving away from Windows-based Dell laptops and Hewlett-Packard desktops in favor of MacBooks, iPads, iPhones and Android phones. Some 10,000 smartphones fall under its sweeping bring-your-own-device policy. It's even replacing cubicles and offices with open work spaces.

"This is a big push, and it's all in relation to the Millennials," Tonnesen says. "As we look to bring on young talent, we're competing with Facebook, Zynga, Google, Apple."

EA's staff retention rate has never been better, Tonnesen says, and consumer tech has played a crucial role.

"A lot of it is how we deliver solutions and services to them...and not encumbering them with old-line technologies," he says.

"Technology tools can facilitate the different ways people work. Why should technology get in the way?"

–Josh Robin, Director of Innovation, MBTA

The effort to keep Millennials happy can sometimes come at the expense of older workers. The biggest difference between the generations is how people communicate, says Adam Noble, CIO at GAF, a manufacturer of roofing materials. Baby Boomers rely on the telephone, Gen X is all about email, and Millennials prefer social networking, instant messaging and even video chat. Tensions rise when, say, an old-line worker gets a video call from a Millennial worker.

"I often joke that if I email my teenage daughters, I'll never get a response," Noble says. "But if I put something on their Facebook page, I may get a response in seconds."

The challenge is to incorporate different styles of communication. Both GAF and EA are working to integrate email and social communication to make the transition easier. Eventually, old-line employees will have to get on board with newer forms of communication.

Cool tech alone may not keep Millennials on board, but it does seem to help, at least more than throwing cash at them does. Last year, Cisco surveyed more than 2,800 Millennials and found that 40 percent of college students and 45 percent of young professionals would accept a lower-paying job in exchange for more flexibility in device choice, social media access and mobility.

This is a generation that watched its parents get laid off and their 401(k)s plummet. And those experiences have eroded a sense of company loyalty that their parents' generation may have had. If anything helps repair their enthusiasm for sticking with a job, it's when their company supports trendy consumer tech. They believe strongly that these tools play to their skills and give them the best opportunity for success, both personally and professionally.

The MBTA's Robin puts it simply: "Technology tools can facilitate the different ways people work. Why should technology get in the way?"

Senior Online Writer Tom Kaneshige can be reached at *tkoneshige@cio.com*. Follow him on Twitter: *twitter.com/koneshige*.

FASTER APPLICATIONS.
FEWER COMPLICATIONS.
SMARTER SERVERS.

Move from the physical to the virtual world with performance that changes the server landscape. Move to the Cisco Unified Computing System.™

With the industry's fastest and most powerful server for virtualization, Cisco helps you move to a whole new level of performance.*

Powered by the Intel® Xeon® processor, Cisco Unified Computing System™ is the server that moves yesterday's data center into tomorrow's productivity center.

Learn more at cisco.com/servers.

*For more information, visit cisco.com/go/ucsbenchmarks.

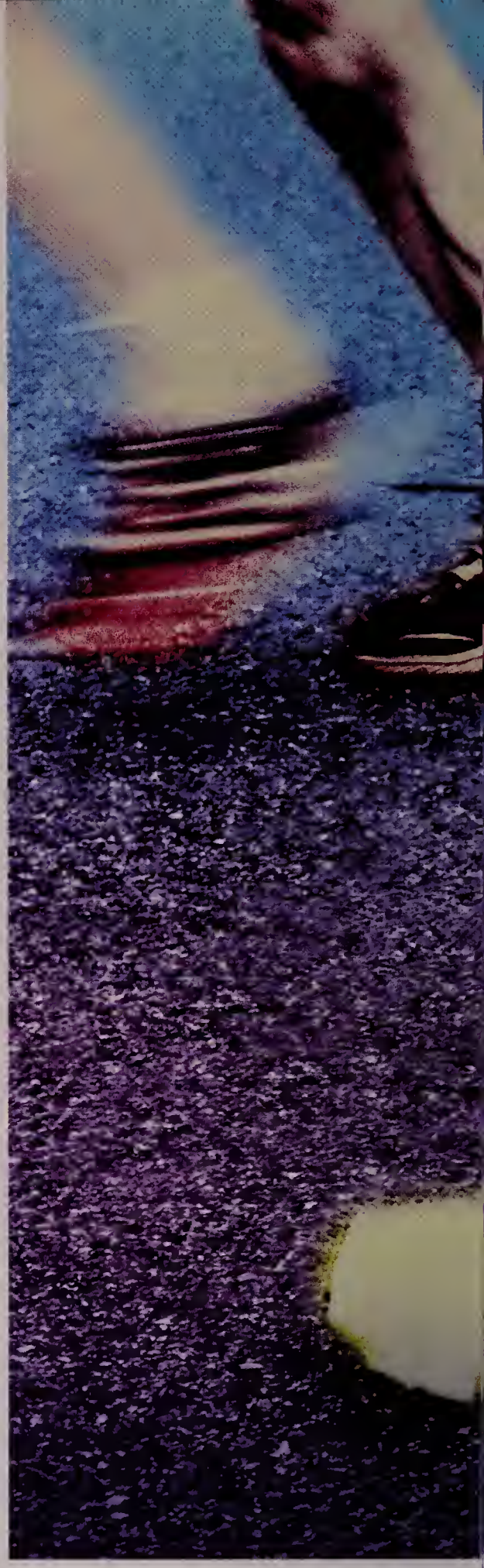
©2012 Cisco and/or its affiliates. All rights reserved. All third-party products belong to the companies that own them. Cisco, the Cisco logo, and Cisco UCS are trademarks or registered trademarks of Cisco and/or its affiliates in the U.S. and other countries. Intel, the Intel logo, Xeon and Xeon Inside are trademarks or registered trademarks of Intel Corporation in the U.S. and/or other countries. All other trademarks are the property of their respective owners.

STAYING POWER

How do CIOs outlast the typical 5-year tenure?

By **avoiding** classic blunders, **winning** the CEO's confidence and **enjoying** a dash of good luck.

BY MINDA ZETLIN



next year, Peter Weis, CIO of Matson, an ocean transportation and logistics company, will see the completion of a very long-term IT transformation project that he conceived and nurtured for most of a decade. "We're heading into our eighth and final year," he says. "When we're done, we'll have retired every single legacy IT platform. Our mainframe will be shut down."

Finishing this transformation project is a source of enormous pride for him and his team. "The day-to-day pain of working on a project like this fades, but the deep satisfaction stays," he says.

It's an experience many CIOs will never have.

ILLUSTRATION BY SEAN MCCABE

Weis has been CIO at Matson for nine years, but the average CIO tenure is just five years and four months, according to a recent *CIO* magazine survey. This may be good news for the CIOs who spend their careers climbing the ladder by moving from company to company. But most CIOs find themselves leaving positions where they would have preferred to stay.

"When we do get called in to do a CIO search, more often than not we're being asked to replace someone who is not succeeding," notes Phil Schneidermeyer, partner at executive search firm Heidrick & Struggles and a *CIO* columnist.

Why do so many CIOs fail? It's not always their fault. "It could be that the business goes sideways, or events overwhelm perfectly well-intended strategies," Weis says. "There could be a change of management or a change of direction. There are always a lot of headwinds for CIOs to try to get through."

In many cases, a long tenure is a matter of luck. "Some CIOs last because the company hasn't demanded any great feats of strength from IT," notes Martha Heller, president of Heller Search Associates and a *CIO* columnist. When the company aims for major accomplishments and things go wrong, the CIO can quickly become a

The Politically Astute CIO

Humility, credibility and sharing credit are key skills for long-term CIOs

Longtime CIOs offer the following tips for building and maintaining the executive relationships that could make the difference between a long or short tenure as CIO:

➲ **Figure out who all the stakeholders are.** "The trap CIOs get caught in is not knowing who the key stakeholders are," says Phil Schneidermeyer, partner at executive search firm Heidrick & Struggles and a *CIO* columnist. "You could have a very hierarchical organization where your key stakeholders are as small as half a dozen people on an executive committee. It could be a partnership organization with 500 stakeholders, each of them a mini-CEO. Whatever it is, you have to know who they are, where they're coming from, how best to communicate with them, and how often. You have to have credibility, and it doesn't come from your background. It comes from the relationships you build."

➲ **Recognize that the IT department doesn't have all the answers.** "No idea is a good idea unless it was created by a business person and a technology person working together," says Rick Mears, CIO at Owens and Minor. "So get over the belief that you know what everybody needs and they'll figure out that they need it after you give it to them."

➲ **Earn credibility by completing IT projects on time and keeping systems up and running.** "You have to deliver relentlessly over time," says Peter Weis, CIO of Matson. "Executive sponsors are accountable, and they're measured based on the large IT initiatives we're driving that they've supported. You have to deliver on time—not one or two times, but over years—so that they don't have to apply a discount factor to what you say you are going to do. You're not going to be perfect, but you have to have way more wins than losses. It's a whole bunch of doubles and singles, as opposed to a few home runs."

➲ **Humility and accountability are essential for a long-term CIO.** "Accept responsibility for errors and acknowledge the effect on the business when those rare instances of failure occur," Weis advises.

➲ **When projects succeed, share the credit as much as possible.** "To me, a CIO will earn more respect and more power if he or she points the finger at others and says, 'You brought more to the table, and so did you, and you, and you,'" says Brian Shipman, who became chief Internet officer at Heritage Auctions in 1999 and then CIO in 2007.

And, Weis adds, if your business contacts try to steal the credit for a successful IT initiative, let them. "It's a lesson I've learned over time: You're better off making business partners look good than coming off as the smartest one in the room," he says. "Trust is only as good as the level of comfort you've built with your business partners, and making every success look like a business success will build that trust."

It can be tough, he acknowledges, because letting business peers take credit for a success means robbing your own hardworking IT staff of those kudos. "That's a hard one, because you want them to have that recognition. But if you don't do it, you're going to lose political support. And IT is by its nature a somewhat thankless job." *–M.Z.*

scapegoat, she adds. "Top management says, 'IT put in that new system and we're still having problems!'" The problem could be that users haven't changed their processes, or many other elements outside IT's control, she says. Nevertheless, "Sometimes companies throw so much mud at the door of the IT department that there's no choice but for the CIO to go."

When things don't go as planned, it's easy for IT to lose the CEO's confidence, Weis adds. "That lack of confidence can show up as capital drying up and investments in IT slowing. The momentum slows on your strategy, projects slow down, and you begin to lose talent." With the best talent leaving, it becomes harder to meet goals and fulfill expectations, and so confidence in IT sinks even lower.

"You've got a spiral downwards," Weis says.

And sometimes a short tenure really is the CIO's fault. Classic blunders include the following:

➲ **Technical failures, missed deadlines and cost overruns.** "If the email server goes down several times in a row, that will cause a problem for the CIO," says Nigel Fenwick, vice president and principal analyst at Forrester Research and a former IT executive at Reebok UK. "And that's just email. If a

Peter Weis, CIO at Matson, says CIOs will last longer in the job if they're experts in the industry, fit in with the company culture and know what's important to the boss.

PHOTO BY MELISSA BARNES

core system like ERP goes down for an extended period and the company grinds to a halt, the CIO is responsible. So taking care of business is fundamental."

Failures in this area can quickly sour a CIO's all-important relationships with top executives. "My boss said, 'You can't have a strong relationship with me if you don't have one with my other direct reports,'" Weis says. "For me to understand all my peers' day-to-day worries is absolutely crucial, and that's a key to staying power."

➲ **Talking technology instead of finance.** "If you approach the CEO and you want to talk about the coolest new storage subsystem you just installed and your Rackspace and the new [voice-over-IP] network you're implementing, that's a pitfall," says Rick Roy, who's been CIO for nine years at CUNA Mutual Group, an insurance and financial services company serving credit unions and their members. "Not many CEOs want to have that conversation, unless they're in the technology industry. Can you translate what you're doing into business language? How is it helping your company against its competitors? That's a very different conversation from talking about the new gadget of the day."

Weis agrees. "There's a squirm factor for CEOs when you start talking about technology. They don't want to learn about it and they're uncomfortable with the conversation," he notes. "You have to be able to speak the CEO's language of corporate finance. How does a balance sheet look? How is return on invested capital measured?" To make sure he understood these core concepts, Weis got an MBA in his 40s. "It made me a better CIO and way stronger." Many of the other IT executives at Matson have done the same.

➲ **Constantly asking for more money.** "Some CIOs have an expectation that with every new technology, their operating budget should go up," says Rick Mears, who for the past seven years has been senior vice president and CIO at Owens and Minor, an $8.6 billion healthcare supply company. "That's a recipe for a short-term CIO."

Instead, he says, successful CIOs understand that operating expense is a finite resource. "I see it as technology's responsibility to free up [operating expense] dollars to offset the funds we need for new [high-impact] technology." For instance, he asks, can moving servers to the cloud create enough savings to pay for a new e-commerce or business intelligence system that will benefit the business? "That's an approach that will get the business more comfortable with IT."

➲ **Inability to build and maintain relationships in the C-suite.** When CIOs do fail, "most often the piece they're not succeeding at is the relationship-management side," Schneidermeyer says. "Those who succeed have very strong relationship-building skills. It's a critical core competency at the CIO level, far more so than technical competency or even expertise in the company's business or industry. A CIO may have grown into that role through strength in managing projects such as application development or consolidating data centers, and that was fine when that was 'the job.' But as the CIO role becomes focused on the business, those skills won't take you to the next level."

The most critical relationship is the one with the CEO, whether or not a CIO reports to him or her directly. "The CIO has governance responsibility with regard to information security," notes Roy at CUNA Mutual. "That's fairly high on the corporate risk list, so there's going to be some board-level attention and you need to collaborate with the CEO."

But that's just one relationship to manage. Even CIOs who report directly to the CEO need to nurture their ties with the rest of the organization's top management. "CIOs who understand the need to communicate across the executive level and the C-suite get support from the C-suite to help them stay in that role," says Forrester's Fenwick.

Having those relationships in place stands CIOs in good stead during the inevitably difficult conversations that arise around technology. "Everyone wants to button everything up, but not change processes. Everybody wants the latest and greatest technology, but doesn't want to consider risk management," Schneidermeyer says. Faced with these tough choices, "it all boils right down to relationship management, and being able to balance competing demands. And you do that by coming together as a management team."

4 Types of CIO Turnover

A former CIO classifies the many reasons that CIOs leave an organization

Gartner analyst (and former CIO) Jack Santos wrote a blog post identifying the following categories of CIO turnover:

Normal turnover
The CIO doesn't like the job or the company, or the boss doesn't like the CIO, or a better opportunity comes along.

Fired for cause
The CIO doesn't meet his commitments on a regular basis, or does something unethical, and is summarily dismissed.

Retirement, burnout, career change or sabbatical
The CIO has had enough of the job and leaves the field (or takes a break from it).

Dysfunctional organization
Through no fault of the CIO, the company is in a state of serious flux or chaos, or has taken on the personality of the CEO, "who needs some serious therapy." These companies churn through key executive positions, especially the CIO.

SOURCE: GARTNER BLOG NETWORK

Scott Houston

FOUNDER AND CEO, GREENBUTTON

Scott Houston has more than 25 years of experience in the IT industry. Before joining GreenButton as CEO, Houston served as CIO for Weta Digital during the production of "The Lord of the Rings" film trilogy. Prior to that, he was the New Zealand Regional Manager for Silicon Graphics and the Southern Regional Channel Manager for Compaq in New Zealand.

Secure, On-Demand IaaS

GreenButton Puts the Cloud within Easy Reach by Partnering with Dell and VMware

Scott Houston saw the need for what's now referred to as cloud computing back in 2003, when he was working as chief technology officer on Peter Jackson's "Lord of the Rings" trilogy. With 10 weeks of production to go on the last movie, he needed to buy an additional 1,000 processors to finish just one shot. He used the computers for two weeks and then didn't need them again for another three years. That experience led him to found the New Zealand Supercomputer Centre, which rents out compute capacity, and later, GreenButton, a company that partners with Dell and VMware to make it easy for companies to "cloud-enable" their applications.

What does GreenButton do, and who are your customers?

GreenButton provides a simple way to automate use of on-demand compute facilities. The GreenButton is an API that we embed in applications so when independent software vendors (ISVs) need additional processing capacity, they press a button, profile a job and send it away to a cloud provider to be processed and returned. Historically, we focus on five markets: digital media for rendering film and animation, oil and gas, manufacturing for design and simulation, biotechnology and financial services.

If a company were to cloud-enable an application on its own, what would be involved?

We've developed tools that profile a job and upload it to the cloud, and a synchronization tool that enables you to select the files and directories you want to move to the cloud. In cloud-based environments you need billing, scheduling and metering to run jobs dynamically, spin up processes, manage licenses and provide user interfaces to let you know when jobs start and stop. For a small organization, writing all of that code takes years' worth of work. Even for very large organizations, it's a year or two of costly development work.

Why is the cloud model well suited to high-performance computing applications?

In the five verticals I mentioned, business is spiky. Many organizations require large amounts of computing capacity in their business but only for two to three months during the year. The cloud grants the ability for organizations to boost out of their own environment to handle the peaks in their business, creating an incredibly attractive alternative.

What makes the combination of GreenButton and Dell Cloud with VMware vCloud Datacenter Services compelling?

The partnership with Dell and VMware means that everyone from startups to the largest Fortune 500 organizations can get a complete solution. First, about 60 percent to 70 percent of all virtualized workloads run on VMware, as does vCloud. Dell is also running GreenButton and works with ISVs to GreenButton-enable their applications. Dell can provide first-tier support on a 24/7 basis. They can engage with the ISVs and their customers to provide a seamless billing and service environment. The combination of a large organization that can engage with the largest projects and enterprises and some very intelligent, nimble software provides an ideal end-to-end solution.

> "The partnership with Dell and VMware means that everyone from startups to the largest Fortune 500 organizations can get a complete solution."

What are some of the key benefits your customers get when using the Dell Cloud platform that they may not get with other cloud providers?

Speed to market. By engaging with Dell and GreenButton, our customers can have their applications running in the cloud in literally a matter of weeks. Dell also has a broad cloud strategy; there are Dell data centers in the U.S. and Europe, and others are opening in the Asia-Pacific region. Dell provides a global cloud footprint and a seamless, secure and cost-effective cloud solution.

FOR MORE INFORMATION
on public cloud initiatives, download our playbook
"Wanted: A Trusted Provider for Public Cloud Services"
at www.cio.com/whitepapers/pubcloud

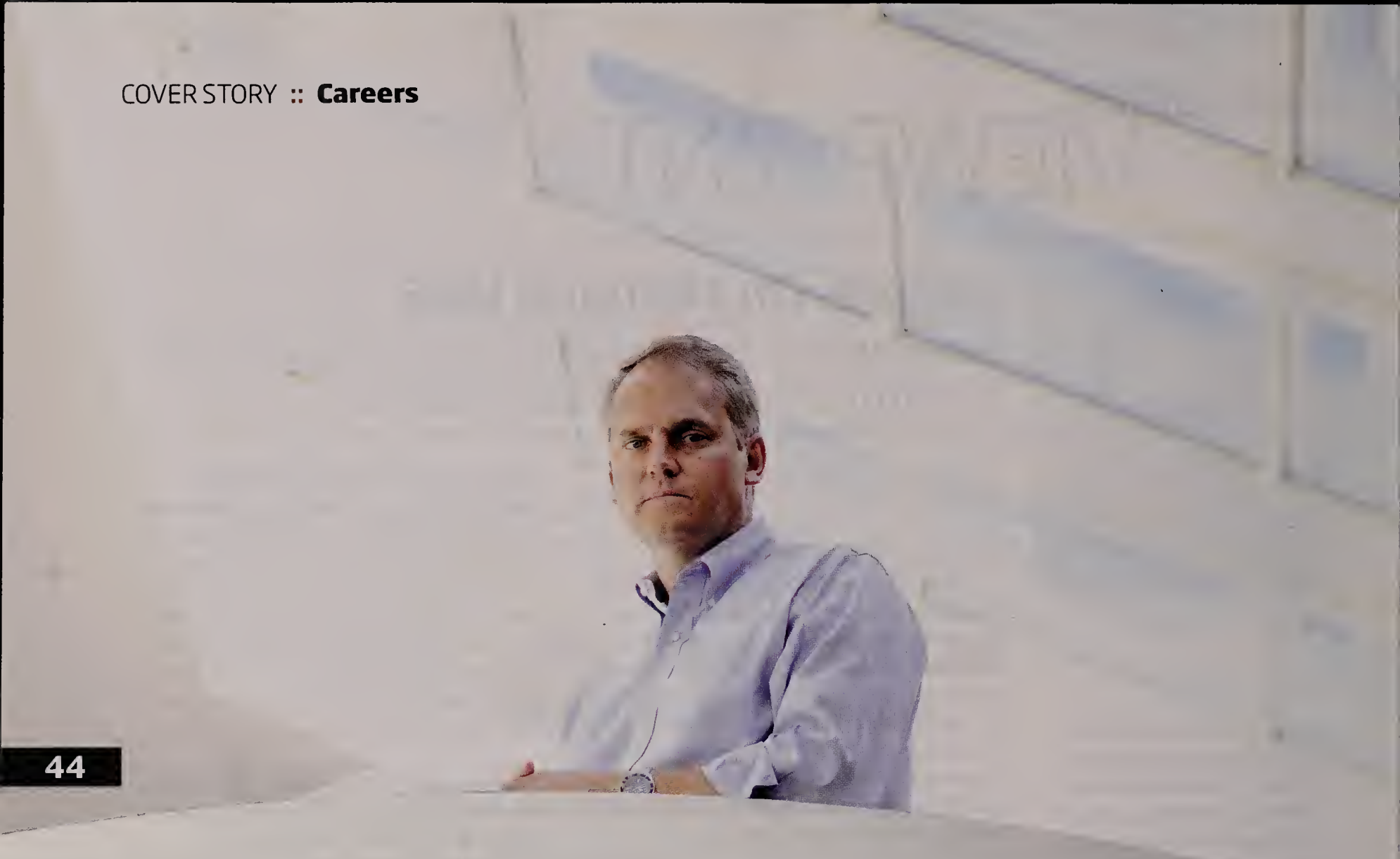
LEARN MORE
at www.dell.com/Cloud

DELL | vmware

Dell Cloud with VMware vCloud Datacenter Service

CIO

Custom Solutions Group



Rick Roy, CIO at CUNA Mutual, says that developing great relationships with other C-level execs is an important step toward a longer tenure as CIO.

Surviving a CEO Changeover

One of the toughest times for a CIO to hang on to his or her job is when a new CEO takes over. In some cases, the battle is lost before it's even begun. "Some CEOs know before they arrive that they're going to bring in their own management team," notes Heller, an executive recruiter.

Other times, the new arrival brings a change in priorities or focus that can bode ill for the CIO. "Our new CEO was really focused on making changes in the line-oriented part of the business, rather than the support side," reports one former CIO who asked for anonymity. The new CEO restructured the lines of business but didn't seem all that interested in discussing the company's technology.

"There was recognition that IT is a key component of change, but it was hard to get the CEO to focus on it," she says. "I got the feeling that once the reorganization was finished on the line side, the CEO would evaluate the back office. So there was change coming, probably." Rather than wait to find out, she moved on to a job as CIO of a different company.

Though the situation can be challenging, there are ways CIOs can improve their chances of faring well in the new regime. Begin by making sure you get to have at least a couple good conversations with the new CEO, advises Roy, at CUNA Mutual. Roy stayed on as CIO when Jeff Post took over as CEO in 2005.

Getting face time with the CEO can be challenging, he concedes. "Thinking back to when Jeff joined us, he's a very externally focused CEO who spends a lot of time with our customers and in our industry. In the very early days, I had to orchestrate some travel times together and attended some industry events with him."

It's not common for CIOs to accompany chief executives to their industries' trade events, but Roy says it was a great opportunity to learn more about the business. "You have to step out of your comfort zone to engage that leader wherever he or she happens to be," he says. "It's not coming to you; you have to go

PHOTO BY KEVIN MIYAZAKI

get it." If, despite such efforts, the new CEO still won't meet with you, it's a sign you should probably move on, he adds.

Once you've got face-to-face time with the CEO, there are a couple of conversations you need to have, Roy says. One is checking to make sure the CIO and the CEO agree about what is expected of IT. The other is a situational assessment. Do you and the CEO see the current state of IT operations in the same light? "If I think everything is fine and the new CEO thinks everything is broken, we need to reconcile as to why we have different points of view and what we're going to do about it," he says. "You can't just find yourself 180 degrees from what the new leader is thinking, because that's not sustainable."

It's important for incumbent CIOs to be able to demonstrate—with solid information and accomplishments—the value of their IT departments. "That's big," Roy says. "If you have the opportunity to tell your story as CIO, do it just as you would to your board. Most presentations I've done to our board are 20 minutes or less, and you have to make sure you get to the point and leave them with the key takeaway." Take that same approach with the new CEO, he advises, since most don't have the time or mental bandwidth to absorb details.

Lining up talking points about IT's performance will also help you if the new CEO brings in a consulting firm to review IT operations—another sign that you may be in a precarious position as CIO. "If you have a good story and you tell it well, it will be harder for the consultancy to throw you under the bus," Roy notes.

All the recommended strategies so far will serve a CIO especially well when a new CEO comes in from another company. But more than 75 percent of CEOs are promoted from within, according to a 2011 study by Booz and Company. A CIO can best prepare for this event by being sure to maintain excellent relationships with all the company's C-suite executives, because who knows when one of them could become your new boss?

That strategy worked well for Weis, the Matson CIO. Matson was formerly a subsidiary of Alexander and Baldwin, but it split off into its own company earlier this year, and Matt Cox, formerly the head of the subsidiary, became the new entity's CEO. "I reported to Matt when he was not CEO," Weis recalls. "Because of my credibility with him, that reporting relationship didn't change even though his number of direct reports grew. I did not go through a transition where I was placed under Finance or a COO, and that's because of how comfortable he was working with IT directly."

"If a CIO is managing internal customer relationships well, that's a great head start," Roy says. "Now the customer got elevated to a bigger role [as CEO], and if that's a happy customer, life is good. You're there to help that person be even more successful. If that's an unhappy customer, it's probably not so good." In that case, he says, it may be time to start looking for a new job.

Do You Fit In?

"Having deep industry knowledge is another key part of staying very close to the CEO," Weis says. "Know your industry—know your boss's industry! If you know the business and how your CEO is measured, the more closely aligned you are, and the more likely [you are] to achieve success."

Even more important is for the CIO to fully understand the company's values, Weis says. "Acknowledge the values, write them down, and think about them," he advises. "Operate by leveraging those values and not trying to change them."

"If you have a good story and you tell it well, it will be harder for the consultancy to throw you under the bus."

–Rick Roy, CIO, CUNA Mutual Group

For example, Matson is a logistics company that values operational excellence and consistency, Weis says. "I can't make Matson value speed over operational excellence and steadiness—I can't do it. I can nibble along the edges of how fast things can get done, but that's all."

Does this add time to projects? Probably, he acknowledges. "Maybe the eight-year plan would have been a four- or five-year plan at some other company where we could have had more disruption and I could break a few things." But in a company where every ship must arrive on time and every delivery must be consistently correct, that wasn't possible.

On the other hand, Matson's focus on steadiness and consistency meant top executives never wavered from the plan, despite dramatically changing circumstances. "It's a testament to our organization's commitment that they hung in there through lots of technical changes and the worst economic downturn of recent times," Weis says.

And he's grateful. "Achieving this large transformation has a lot of meaning for me," he says. "It seems like a once-in-a-lifetime opportunity." CIO

Minda Zetlin is a business technology writer based in New York and co-author of *The Geek Gap: Why Business and Technology Professionals Don't Understand Each Other and Why They Need Each Other to Survive*.

CIO

SALES AND SERVICES

EXECUTIVE COMMITTEE

President & CEO
Michael Friedenberg
508-935-4274

Executive Assistant to the President & CEO
Pamela Carlson
508-935-4274

SVP of Human Resources
Patricia Chisholm
508-935-4734

SVP of Events
Ellen Daly
508-935-4273

SVP & Chief Content Officer
John Gallant
508-766-5426

SVP of Digital
Brian Glynn
508-935-4586

SVP of Strategic Programs & Custom Solutions Group
Charles Lee
508-935-4796

SVP, Group Publisher & CMO
Bob Melk
415-975-2685

SVP &General Manager, Online Operations
Gregg Pinsky
508-271-8013

SVP of DEMO
Neil Silverman
508-766-5463

SVP & COO
Matthew Smith
508-820-8102

SVP & General Manager
CIO Executive Council
Pam Stenson
508-935-4089

SVP of Digital, & Publisher
Sean Weglage
415-978-3314

SALES

Publisher Emeritus
Gary J. Beach
508-935-4202

VP & Publisher
Adam Dennison
508-935-4087

Sales Operations Manager
Christine McKay
508-988-7836

Senior Sales Operations Coordinator
Bethany Whiffin
508-935-4092

Sales Operations Coordinator
Megan Roman
508 820-8123

EAST COAST

Account Director, Integrated
Ellie St. Louis
201-634-2332

Account Coordinators
Alex Pierce
508.766.5345

NEW ENGLAND/ CENTRAL

Account Director, Integrated
Brian Keenan
847-508-8428

Account Coordinator
Stephanie Moran
508-935-4154

WEST COAST

Regional Sales Director, Integrated
Kevin Ebmeyer
415-975-2684

Account Director, Integrated
Ai Collins
415-975-2686

Account Coordinator
Lauren Eckenfelder
415-935-2687

ONLINE SALES

Account Director, Digital, East Coast
Richard Hartman
508-935-4487

Account Directors, Digital, West Coast
Carmen Facas
415-975-2681
Erika Karr
415-978-3329

Director of Ad Operations & Project Management
Bill Rigby • 508-820-8111

Director of Online Account Services
Danielle Thorne
508-988-7969

Online Account Services Team Leads
Beverly Lloyd
508-988-6765
Tara Shea
508-988-7877

LIST SERVICES

Contact Stephen Tozeski of IDG List Services at 508-766-5633 or *stozeski@idglist.com.*

CIO CONTACT INFORMATION

Editorial, Advertising and Business Offices: CXO Media Inc., 492 Old Connecticut Path, P.O. Box 9208, Framingham, MA 01701-9208, 508 872-0080.

CIO (ISSN 0894-9301) is published monthly, with additional issues in May, June, September, October and November by CXO Media Inc. Periodicals postage paid at Framingham, MA, and at additional mailing offices. Canada Publications Mail Agreement Number PM40063731. CANADIAN POSTMASTER: Please return undeliverable copy to P.O. Box 1632, Windsor, ON N9A 7C9.

Reprints & Permissions: For information about reprints and copyright permissions, please contact The YGS Group, 800-290-5460, ext. 100, *cio@theygsgroup.com.*

Reprints & Permissions: For information about reprints and copyright permissions, please contact The YGS Group, 800-290-5460, ext. 100, *cio@theygsgroup.com.*

Change of Address: Please go to *http://www.cio.com/subscription-services* and follow the online instructions.the online instructions.

INDEX OF COMPANIES AND ADVERTISERS

Page numbers refer to the first page of the article(s) in which the company has a substantial mention. This index is provided as a service to readers. The publisher does not assume any liability for errors or omissions.

COMPANY INDEX

CUNA Mutual Group 42
Development Dimensions International 18
Directions on Microsoft 34
Electronic Arts 36
Facebook 32
Forrester Research 18, 22, 30, 40
Fresno Unified School District 34
GAF 36
Gartner 34
Google 30
H80 24
Heidrick & Struggles 39, 40
Heller Search Associates 39
Heritage Auctions 40
Hertz 20
Industrial Wisdom 22
Lotus F1 Team 17
Massachusetts Bay Transportation Authority 36
Matson 38, 40
Microsoft 34
Owens and Minor 40, 42
PricewaterhouseCoopers 26
Purdue University Calumet 28
Reebok UK 40
Stratagem 1 Solutions 28
Tennessee Department of Education 34

ADVERTISER INDEX

Alcatel-Lucent C3
Avigilon 27
Cisco Systems, Inc. 37
Dassault Systemes 19
Dell and VMware 43
Hewlett-Packard Development Co., LP C2
IBM Corp. C4, 9
Level 3 Communications 16
Melissa DATA Corp. 47
Newsgator 25
NTT DATA 29, 31, 33, 35
Samsung Electronics 10, 13
Schneider Electric 15
ShoreTel 5
SonicWALL 21
Splunk, Inc. 2
T-Systems 23
VMware, Inc. 7

LEGAL NOTICE

U.S. POSTAL SERVICE Statement of Ownership, Management and Circulation (Required by 39 U.S.C. 3685)

1. Title of Publication: CIO
2. Publication No.:002-988
3. Date of filing: September 12, 2012
4. Frequency of issue: 17 issues annually
5. Number of issues published annually: 17
6. Annual subscription price: $129.00
7. Location of known office of publication: 492 Old Connecticut Path, PO Box 9208, Framingham, MA 01701-9208 (Middlesex-Central County).
8. Location of the headquarters of general business offices of the publishers: CXO Media, 492 Old Connecticut Path, PO Box 9208, Framingham, MA 01701-9208 (Middlesex-Central County).
9. Names and addresses of the publisher, editor and managing editor: Group Publisher, Adam Dennison, 492 Old Connecticut Path, Framingham, MA 01701-9208. Editor-in-Chief, Maryfran Johnson, 492 Old Connecticut Path, Framingham, MA 01701-9208. Managing Editor, Christine Celli, 492 Old Connecticut Path, Framingham, MA 01701-9208
10. Owner: International Data Group, 1 Exeter Plaza, Boston, MA 02116-2851.
11. Known bondholders, mortgages and other security holders owning or holding 1% or more of total amount of bonds, mortgages or other securities: International Data Group, 1 Exeter Plaza, Boston, MA 02116-2851. None
12. For completion by nonprofit organizations authorized to mail at special rates: Not applicable.
13. Publication Name: CIO
14. Issue date for circulation data below: September 15, 2012.
15. Extent and nature of circulation:

		AVG. NO. COPIES EACH ISSUE DURING PRECEDING 12 MONTHS	ACTUAL NO. COPIES OF SINGLE ISSUE PUBLISHED NEAREST TO FILING DATE
A.	Total number of copies printed (net press run)	132,415	134,353
B.	Legitimate paid and/or requested distribution (by mail and outside the mail)		
	1. Outside county Paid/Requested mail subscriptions stated on PS Form 3541	130,563	132,521
	2. In-county paid/requested mail subscriptions stated on PS 3541	0	0
	3. Sales through dealers and carriers, street vendors, counter sales, and other non-USPS paid distribution	363	588
	4. Requested copies distributed by other mail classes through the USPS	0	0
C.	Total paid and/or requested circulation	130,926	133,109
D.	Nonrequested distribution (by mail and outside the mail)		
	1. Outside county nonrequested copies stated on form 3541.	0	0
	2. In-county nonrequested copies stated on form PS 3541	0	0
	3. Nonrequested copies distributed through the USPS by other classes of mail	0	0
	4. Nonrequested copies distributed outside the mail	1,515	1,068
E.	Total nonrequested distribution (Sum of 15d (1), (2), (3) and (4))	1,515	1,068
F.	Total distribution (Sum of 15c and 15e)	132,441	134,177
G.	Copies not distributed	1,515	1,068
H.	Total (Sum of 15f and 15g)	133,956	135,245
I.	Percent paid and/or requested circulation (15c/15f x 100)	99.0%	99.2%

I certify that the statements made by me above are correct and complete.

Diane Turco
Circulation Manager

NOTICE

AVOID CONTAMINATION WASH YOUR DATA

The simple act of washing your hands is the most effective way of preventing the spread of infection – and the same goes for your data. Prevent the spread of bad decisions, waste, and lost marketing and sales opportunities with the Data Quality Suite from Melissa Data.

Our Data Quality Suite enables you to:

- **Verify, correct, and standardize U.S. and global addresses**
- **Validate, parse, and standardize email addresses**
- **Verify phone numbers and identify as cell, landline, or VOIP**
- **Verify and genderize names, and detect company names and suspicious words**

The Data Quality Suite is available as multiplatform programming APIs or in the cloud for real-time and batch processing.

STOP the Spread of Dirty Data – START Your Free Trial Today!

Visit www.melissadata.com/dqs
or call 1-800-MELISSA (635-4772).

MELISSA DATA®
Your Partner in Data Quality

finish

iLie Detector

Political TV ads making outlandish claims surface almost daily in a presidential election year. Voters who want to separate the myths from the truth can try one of a number of mobile apps, including the free Super PAC iPhone app developed by Dan Siegel and an MIT classmate of his. "There are a lot of digital tools for people with money who want to get their voice out there, but not a lot of tools for the other [people]," says Siegel. If you hold your phone up to the TV, the app will identify an ad by its audio fingerprint, reveal how much money the political action committee (PAC) that funded the ad spent on the campaign, and fact-check the commercial's claims using mainstream news sites and sites like PolitiFact and FactCheck.org. Users can then rate the ad and share it on social media sites. Siegel says he hopes to extend Super PAC's functionality to commercials for other political activities and products. The app was developed with support from a private grant. "We don't need a super PAC to fund the Super PAC app," Siegel says. *–Lauren Brousell*

PHOTO BY COMSTOCK IMAGES/GETTY IMAGES

Personal Cloud Poses IT Challenge

Consumer devices spur new approach to infrastructure, applications

Michel Emelianoff

ALCATEL-LUCENT,
ALCATEL-LUCENT ENTERPRISE

Michel Emelianoff is Executive Vice President of Alcatel-Lucent and President of Alcatel-Lucent Enterprise. Prior to this, he was Vice President and General Manager, Data and Security Solutions for Alcatel-Lucent Enterprise. Emelianoff joined Alcatel Enterprise in 1998 as Sales Director, Northern Europe and quickly became Vice President of business development for North America. He next led the large enterprise voice business unit, driving the shift from traditional voice to IP and expanding the business into emerging markets.

Emelianoff is a graduate of "Ecole Centrale" Paris with a degree in Aeronautical Engineering.

FOR MORE INFORMATION
download **"The Personal Cloud: Empowering Users; Enabling Productivity"** at **www.cio.com/whitepapers/al-lu/cloud**

Alcatel·Lucent Enterprise

CIO
Custom Solutions Group

While much is written about the "bring your own device" phenomenon, Michel Emelianoff says BYOD is a mere symptom of something much larger: the transformation of IT away from the PC-centric era to a new, services-centric model. Alcatel-Lucent calls it the personal cloud era, and we caught up with Emelianoff to explain what it's all about, the challenges it presents to IT and how best to address them.

How do you define the personal cloud?
The personal cloud is the virtual space that encompasses the unique collection of services, Web destinations and applications that a given user wants access to all the time, independently of the device they have in front of them or whether they're at work or home. It's the result of a transformation that is happening in terms of how users are consuming applications and services, fueled by the rapid adoption of tablets and smartphones and the growth of app stores like iTunes.

As we enter the era of BYOD and the personal cloud, what are some of the key challenges facing IT?
The first is to recognize what the transformation is about. It's not about the device; it's about services and how to access and consume services. The second challenge is to understand what you need to do to actively embrace that transformation. What are the delivery mechanisms you need to put in place to offer users the type of services they are looking for? What infrastructure do you need to address some of the underlying IS/IT challenges that come with that transformation, in terms of bandwidth, security, confidentiality and so on.

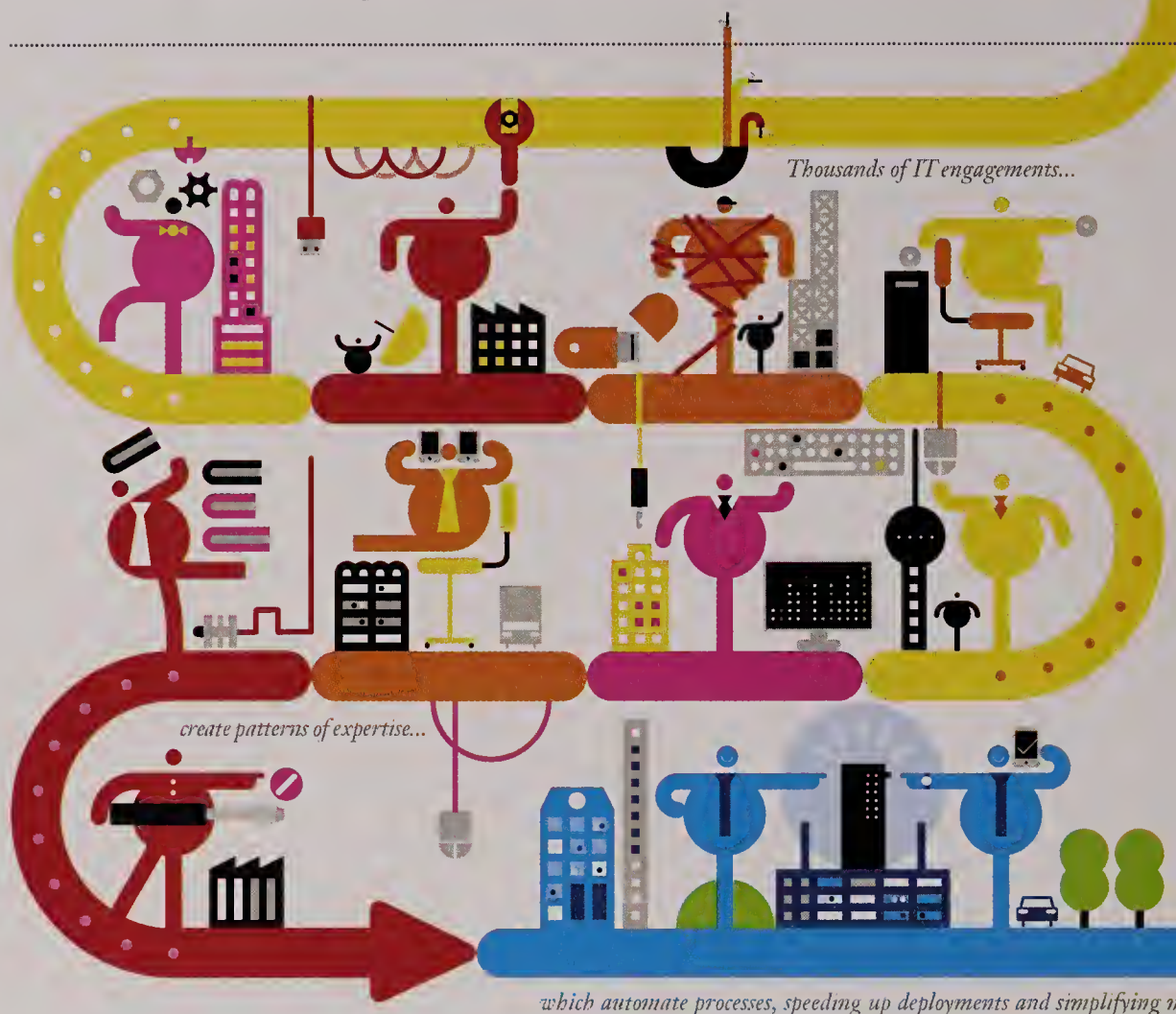
What are some of the ways Alcatel-Lucent helps customers meet the demands that all these multimedia applications put on the network infrastructure?
First, behind all these devices, you must be able to recognize the user as an individual so you can apply the right set of policies, to allow or not allow certain flows and transactions. Challenge number two is being able to recognize the application a user is trying to access and apply the right SLA. If I'm doing FaceTime with my 6-year-old, that doesn't have the same level of importance as a videoconference with a work colleague.

> "This transformation is inevitable. It is fundamentally driven by users, so it will happen. If I have one message for enterprise IT, it's that they have to proactively embrace it; don't be reluctant."

What kinds of applications does Alcatel-Lucent have to help customers take advantage of this multimedia world?
This is about rethinking the way people communicate while fully exploiting the capabilities of these new devices. A good example is OpenTouch Conversation, which is the new face of our communications solutions for the iPad. It gives the ability to easily set up a communications session with another individual, select the most appropriate media—whether it's voice, video or IM—and move from one media to another without having to switch to a different session. You can even fluidly switch from one device to another without disrupting the session.

What's the key message you want to leave folks with about Alcatel-Lucent and the personal cloud?
This transformation is inevitable. It is fundamentally driven by users, so it will happen. If I have one message for enterprise IT, it's that they have to proactively embrace it; don't be reluctant. Alcatel-Lucent has the capability to help them without taking a rip-and-replace approach. We'll protect what works well and is the right solution for certain users and allow others to evolve to new communication models.

FROM DEPLOYING IN MONTHS



expert integrated systems can be up and running in as little as four hours.[2] And once deployed, these systems can automatically scale and adjust resources as the needs of the business change—a process that might otherwise take weeks—freeing IT people to focus on larger, more strategic goals.

"It's not going to be about tinkering...It's getting back that thirst to make something."

Andrew Smith
VP, McKesson IT

TO READY IN HOURS.

According to Forrester, the typical IT department spends at least 33% of a project's budget just specifying, designing and procuring IT components. And once procured, it can take up to three months of tweaking before those resources are ready to be used.[1]

With decades of experience and thousands of deployments in the same industries, on the same topics, even for the same tasks—why is it that organizations are forced to waste massive amounts of time and resources starting from scratch with every new project?

INTRODUCING
IBM PURESYSTEMS.

To address this problem, IBM set out to design a system that could benefit from previous experience—a system that could follow the patterns established by successful IT projects to make it simpler to deploy and manage new ones.

An IBM PureApplication™ System cuts the deployment of OneTree Solutions' PriceLenz™ software from 3 weeks to 8 minutes.

With the launch of PureSystems,™ we are now delivering on that promise.

Using patterns established by IBM and leading software vendors, this new breed of

On a smarter planet, organizations will no longer address complex challenges with generic systems. Instead they can rely on integrated systems with the built-in expertise to help solve them. **ibm.com/simplify**

LET'S BUILD A SMARTER PLANET.

IBM®

1. Based on a 2011 commissioned study conducted by Forrester Consulting on behalf of IBM. 2. Based upon testing of the IBM PureApplication System W1500-96 with time measured from powering on the system to when it is ready to support application deployments and based upon testing of the IBM PureFlex System Express & Standard models containing one chassis and one compute node with the time measured from powering on the system to when it is ready to support a virtual image deployment. IBM, the IBM logo, ibm.com, PureApplication, PureSystems, Smarter Planet and the planet icon are trademarks of International Business Machines Corp, registered in many jurisdictions worldwide. A current list of IBM trademarks is available on the Web at www.ibm.com/legal/copytrade.shtml. © International Business Machines Corporation 2012.